UNIVERSITÉ DU LUXEMBOURG

LUCET | LUXEMBOURG CENTRE FOR EDUCATIONAL TESTING

OASYS v3.5

OASYS Manual for Users

Version: 1.0

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Contents

Chapter 1

Introduction

1.1 About OASYS

OASYS is a multi-platform and multi-device digital testing and assessment system built around **state-of-the-art web-technologies**. OASYS has been carefully **designed around business processes, following a research-based HCI approach**, thus ensuring optimized user experience.

To assure secure data collections and best possible service, OASYS offers powerful live monitoring for test administrators. Every response is communicated and logged instantaneously on OASYS servers, which minimizes the loss of data even during potential client side computer crashes.

Speaking of security, OASYS developers undergo regular security training, and OASYS underwent state-of-the-art **penetration testing and code review by external security consultants**.

OASYS collects timestamps of every action, thus making the platform an ideal choice for behavioural analysis and data mining.

A load balancing solution allows for around 20K simultaneous client connections in the current server setup.

Although OASYS has been designed primarily as an online assessment system, the client can also run in an app with a server installation on a laptop and a mobile Wi-Fi access point, thus allowing for digital testing in areas with poor or no internet connection.

Since 2010, OASYS is **used successfully in the Luxembourg school monitoring programme ÉpStan**. Moreover, since 2014, OASYS is also the platform of choice for student course evaluations and various in-house surveys at the University of Luxembourg.

1.2 Audience

This manual is intended for individuals who want to use OASYS to:

- Create items and content.
- Compile tests or surveys from the content.
- Create and manage test takers.
- Work with the results and responses obtained in the tests and surveys.

For administrative tasks in OASYS, such as the creation and management of users, there is a separate manual.

Chapter 2

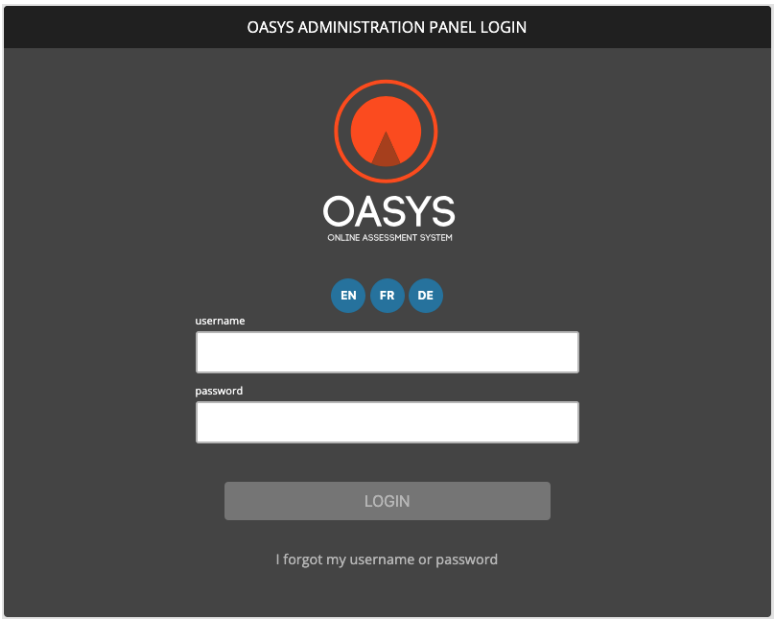
Getting Started

2.1 Backend and Frontend Getting Access

OASYS is a web application. This means it runs in a browser. There are two different areas: the frontend and the backend.

Frontend: This is the area where test takers complete their tests. Here, they can access test questions, enter their answers, and view their results.

Backend: This is the area where tests are created, edited, and managed. Access to the backend requires a special user login. If you need access to the backend, please contact your designated administrator. The administrator can create a user account for you and provide you with the necessary login credentials.



Backend login

On the login screen, you can choose your **preferred language**.
At the bottom of the screen, there is a link for retrieving your username or password. **This feature has to be configured in OASYS**. If it is missing, please ask your administrator.

2.2 Basic Concepts

The basic concept of OASYS is based around four core entities:

- **Content**
- **Tests**
- **Test Takers**
- **Passwords**

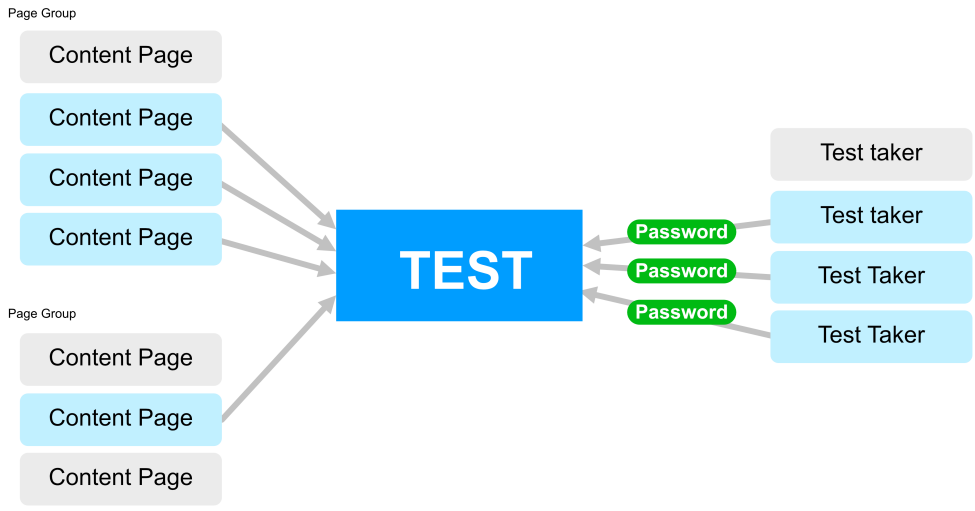
Content is organized into page groups. Page groups contain pages. Pages contain content, which can consist of tasks, interactions, or static content. Pages are the fundamental building blocks of tests.

Tests are assembled from existing pages. At the test level, conditions are set. Conditions include, for example, the order of pages, available time, navigation within the test, and similar aspects.

Test takers represent individuals who take one or more tests. They are stored in OASYS independently of tests. This means that test takers can be assigned to tests repeatedly over an extended period.

Passwords provide the connection between test takers and tests. A password is generated for a test taker who has already been created in OASYS, and this password is then associated with one or more tests. In the OASYS frontend, the test taker logs in using their test taker name and corresponding password, and is automatically directed to their assigned test.

Please note that, in case you are creating test takers as student logins, the term password is replaced with the term label. This doesn't change the basic concepts.



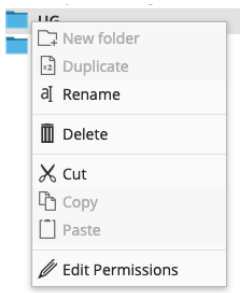
Core entities in OASYS.

2.3 Folders

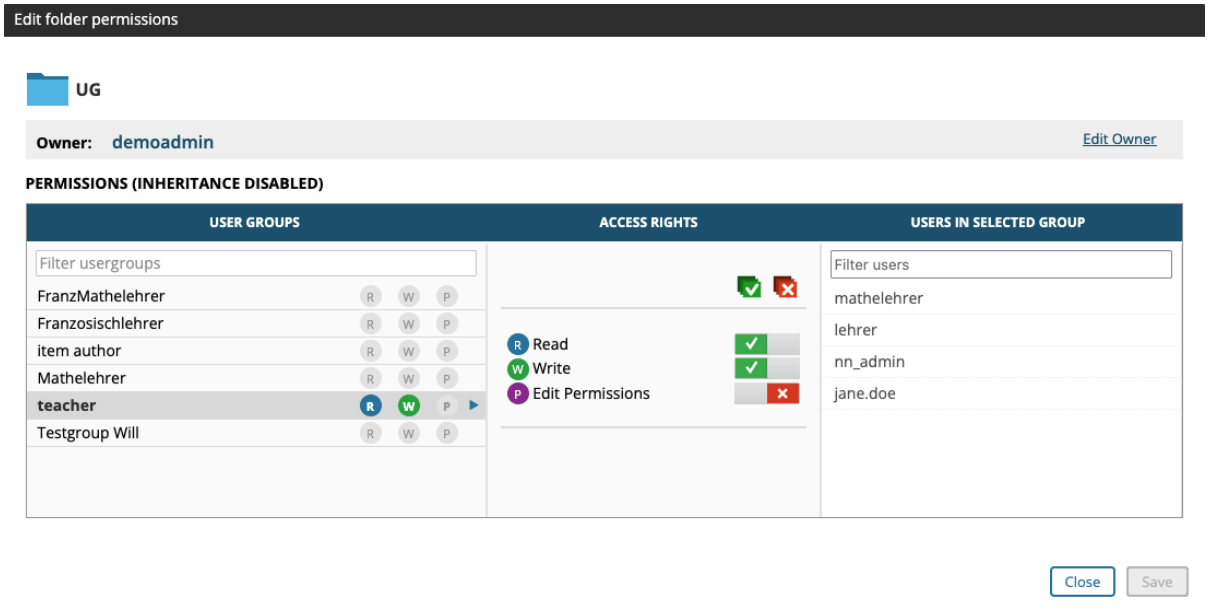
All the content you are working with in OASYS can be organized in folders. There are two main purposes of folders:

- Organizing items
  This is no different from the way you store files in folders on your computer to keep an overview.
- Sharing your content or keeping it private
  Access rights to content in OASYS are set at the folder level. When you create folders, you can specify which other users can access them. To do this, you need to edit the **permissions** (see the infobox below).
  Please note that permissions are **group-based**. You cannot grant access to a specific person. You must grant access to the **group** this person is in.

Setting folder permissions

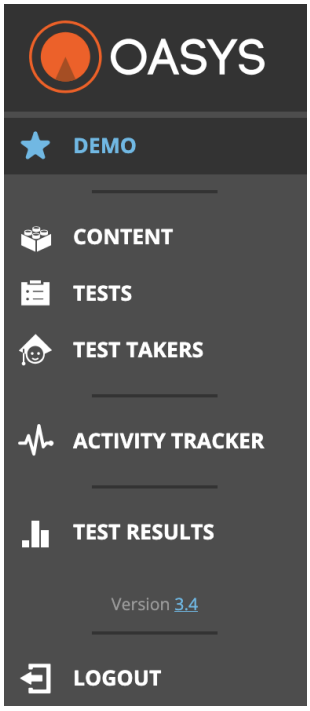


Right-click a folder and choose **Edit Permissions** from the context menu.



In the dialog that appears, choose the user group you want to grant or restrict access to. There are three rights you can edit. **Read** means read only. **Write** means that the members of the selected group can edit (change) the objects in the folder. **Edit permissions** means that you give them the possibility to add or remove groups who have access to the folder and to change read or write permissions.

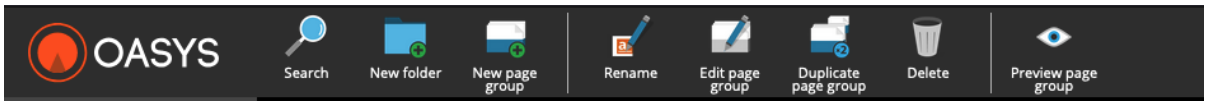
2.4 Main Menu and Toolbar



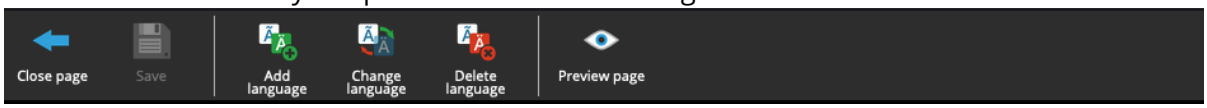
The **main menu** is located on the left side of the screen. Through the main menu, you can access the various apps of OASYS, such as the content manager or the activity tracker. Depending on your account type, the items of the main menu may vary. This manual covers all the apps that are typically used for the creation and administration of tests.

The **toolbar** is located at the top of the screen. It is context-sensitive, i.e. its content changes depending on what you are working with. The toolbar provides you with the set of tools that you can currently use.

Context Sensitive Toolbar



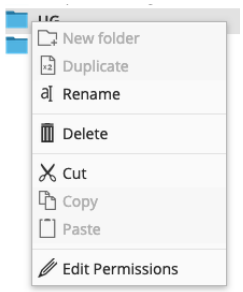
Toolbar content when you opened the content manager



Toolbar content when you are working on a page

2.5 Good To Know

The Right Click Menu



When working with content, tests, or test takers, a context menu is available. Simply right-click an entry in the left column. You can then choose from a list of possible quick actions.

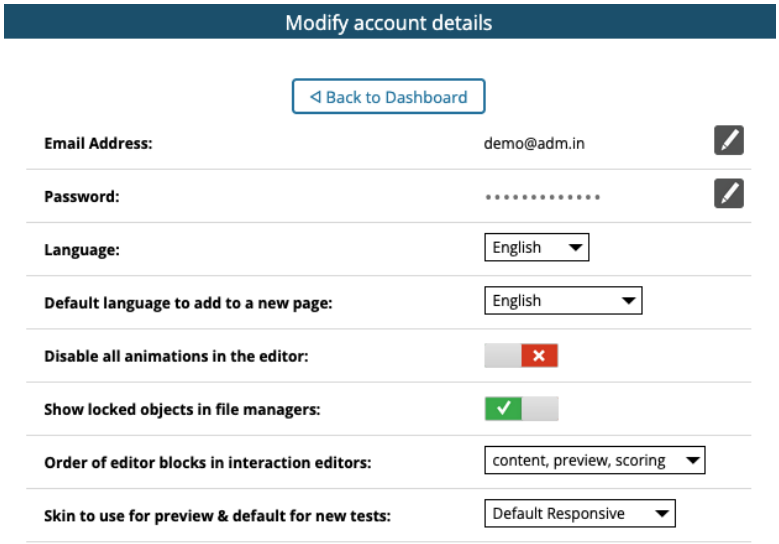
Chapter 3

Using OASYS

3.1 The Dashboard

The dashboard is the homepage of the OASYS backend. From here, you can access your **account settings** (gear icon), the **logout button**, and your **watchlist**.

3.1.1 Account Settings



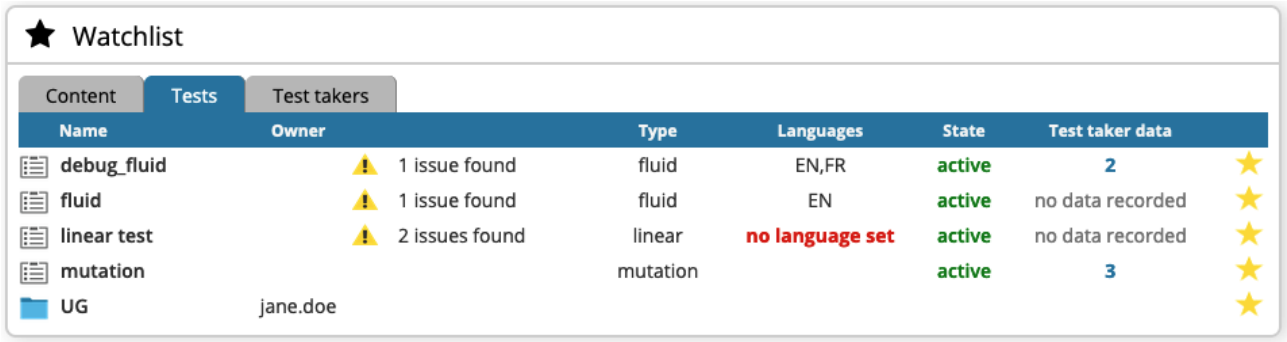
Account settings

- **Email address:** The **forgot my username or password** link on the login screen requires a valid email address. This feature must be set up by your administrator. **Contact your administrator if it is not available**.
- **Password:** This field is only available if your account password is directly stored by OASYS. If an external authentication provider is used (LDAP or SAML, typically your company login) you must request a password change there. If you are unsure, contact your administrator.
- **Language:** The language of your user interface.
- **Default language to add to a new page:** OASYS was developed to provide assessment content in multiple languages. Here, you can set the default language that will be used when creating new content.

- **Disable all animations in the editor:** By default, OASYS is using transitions when you are working in the backend. In case you are experiencing performance problems, you can disable them here.
- **Show locked objects in file managers:** OASYS is using a permission system for the access to content. This option shows or hides objects you don't have access to.
- **Order of editor blocks in interaction editors:** You can choose a layout for working with content. See chapter Interactions.
- **Skin to use for preview & default for new tests:** A skin modifies the layout and appearance of a test. The default is **Default Responsive**. See chapter Tests.

3.1.2 Watchlist

In OASYS you can bookmark any folder, page group, test taker or test. Your bookmarked items are displayed as lists within the watchlist. In addition, the type of item and a selection of information about it is shown. Clicking an item on the watchlist will take you directly to it for editing.



Columns

- **Name:** The name under which the object was saved.
- **Owner:** The owner of the folder. If the object isn't a folder, the column remains empty.
- **Issues:** Displays any issues found with the object.
- **Type:** For tests, the type of test (linear, fluid, mutation), for test takers, the type of login (standard, template, student).
- **Languages:** For tests only. The languages activated for the test. Shows a warning if no languages are activated.
- **State:** For tests only. The accessibility state of a test (active, deactivated, scheduled). Hover over an entry for detailed information.
- **Test taker data:** For tests only. Displays either no data recorded or the number of test takers results are recorded for.

Adding Something to your Watchlist

Wherever you see a star next to an item, you can click it to add the item to or remove the item from your watchlist. Hover over an entry for more detailed information. For folders, this column remains empty.

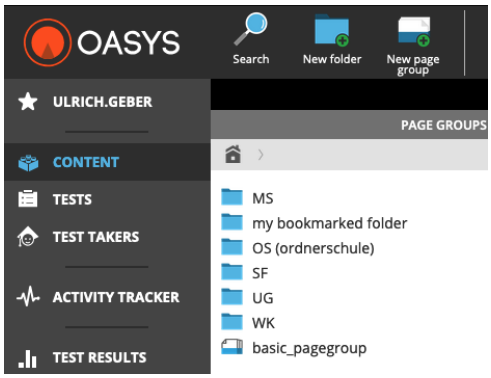
Locked Items

If you see a padlock icon on one of your bookmarked items, it means you no longer have access to it. This is because the owner has removed or changed the access settings. If you still need access, please contact the owner or your administrator.

Chapter 4

Content Manager App

The content manager app is where you can create, edit, and organize the content for your tests.



When you open the content manager, you will see a list of the available content. OASYS refers to such a list as a file browser. The list can contain folders and page groups.
You can navigate into a folder by double-clicking on it.
You can select any item by single-clicking on it.
Tip: Don't forget the right-click menu!

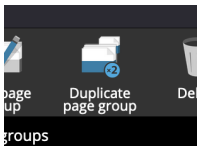
4.1 Page Groups

Page groups are the basic containers for test content. You can create pages within a page group. Pages will be used to assemble a test.
Create a new page group by clicking the 'New page group' button in the top toolbar.
You will then be prompted to enter a name for your new page group.

Naming Page Groups

You will use the name as an identifier, i.e., it should give you or your colleagues some information about the content. It has proven useful in practice to either use the name of the test in which the included pages will be used, or the topic for which the pages were created.
Naming by test: If the pages are created to be used in a specific test only. This will be very convenient when you assemble the test, as you will only have to open one page group.
Naming by topic: If the pages are intended as a collection of tasks on a topic. As pages can be used in multiple tests ,and tests can be assembled from multiple page groups, this will help you to keep an overview of your reusable pages. It is also helpful if you intend to share your content.

Duplicating a Page Group

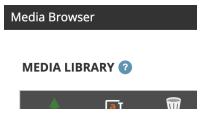


When you assemble a test, pages are not copied to the test, but simply linked.
If you change content which is already used in a test, you will change that test!
In order to avoid issues, you may want to duplicate an existing page group, and then make your changes to the copy. Simply select the page group, then click the 'Duplicate page group' button in the toolbar.

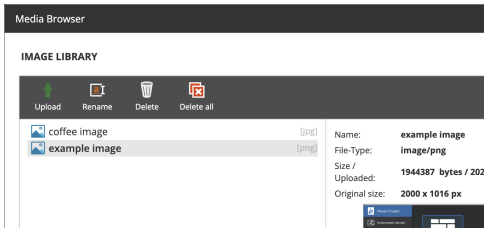
The Media Manager

The media manager is used for uploading and managing media that you can insert into OASYS content elements.

Any media used in OASYS content belongs to a single page group and cannot be shared among different groups. The media manager will become accessible in the menu as soon as you start editing a page group.



OASYS accepts a variety of image, video and audio file formats. For a detailed list of supported formats, click the blue question mark next to the heading.



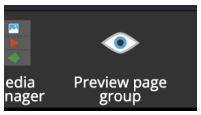
The Media Browser is also available when you are creating content elements which allow media. Depending on the context, the Media Browser opens as an image, video, or audio library.

The left column shows you the list of available media. When you select one, its basic properties are shown in the right column.
The available tools are **Upload** (opens a dialog for browsing your computer for files), **Rename**, **Delete** and **Delete all**.
Be aware that you cannot delete a media file which is currently in use in any page. You'll need to delete it from the page first!

4.2 Pages

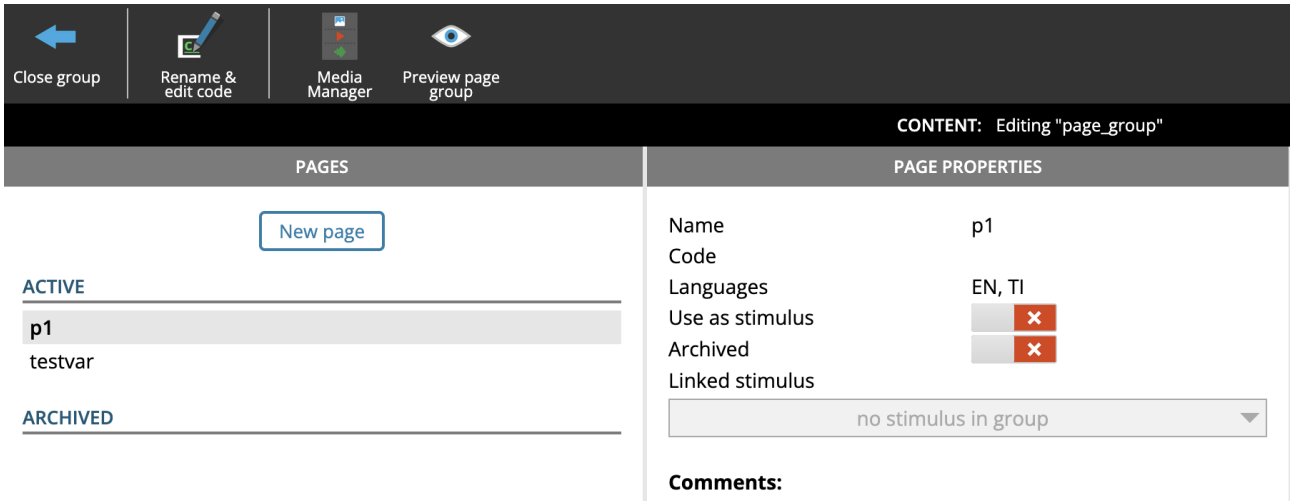
Pages contain interactions (tasks), and static content. A page represents a screen in a test, i.e., tests are sequences of pages.
While in the content manager, select a page group. Move the mouse to the right column. The hover shows a pen icon. Click it.
In the right column, you see a button labeled **New page** and, if there are any, the list of pages contained in the page group.
In order to edit a page, hover it and click the pen icon.

Previews



The preview icon in the toolbar opens a preview in a new browser tab.
Previews are available for **page groups, pages and tests.**
The preview shows the item you are previewing as a test taker will see it when taking a test.

When you are in editing mode you will see the following.



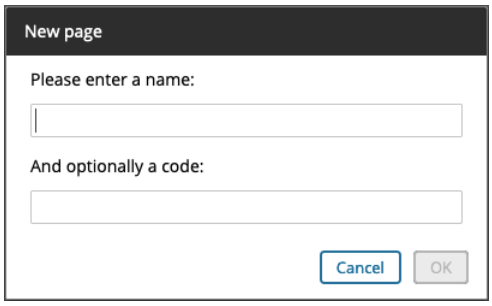
The pages column has two groups: **ACTIVE** and **ARCHIVED**. These are only flags you can use to distinguish, for example, older versions of a page from currently used ones.
The archived flag can be set in the properties column.

You can

- Create a new page.
- Review the properties of a page.
- Open an existing page in order to edit its content and properties.
- Rename and edit the code of a page.
- Upload media you want to use in the page group.
  For detailed information, please refer to the description of the media manager: Media Manager

4.2.1 Creating a New Page

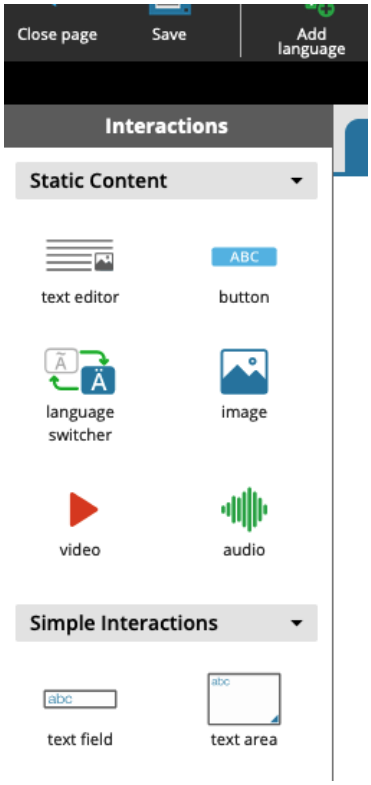
Click the **New page** button.



In the dialog box, you will be prompted to enter a name, and optionally, a code for the new page.
The name is used in the list view and can be used in the search feature. It should be your first method for identifying a page. Keep in mind that OASYS tolerates duplicate page names!
The code is optional and can be used as a secondary identifier. Usually, it is used for more technical purposes such as statistics, or linking to an external database.

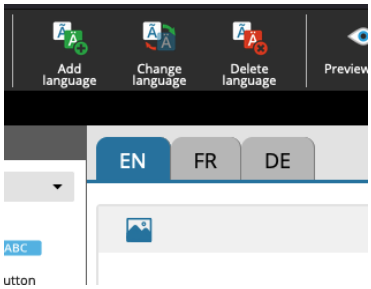
4.2.2 Editing a Page

In the list view, double-click a page or hover over a page and click the pen icon.



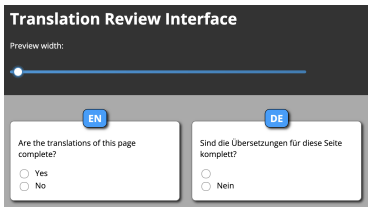
The left panel contains the interactions and static content types which can be used on a page.
You can add them by simply dragging one of them into the middle column. You can change their order later by dragging them up and down.
In-depth explanations on interactions will be provided in the Interactions section.

OASYS is designed to support multiple languages within a test page.
You can add, remove, or switch languages by using the buttons in the toolbar.
New languages will be created as tabs. Use them to navigate between the languages of your page.
Important: When you add a language, the existing interactions will be duplicated to the new language. The technical parts, like values and properties, will be synchronized whenever changed for one language. Only the visible parts like labels, questions or text can differ between languages.

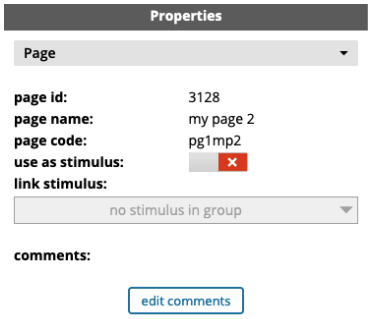


Review Translations opens a new browser tab. There, the available languages of a page are displayed side by side.

The translation review interface makes it easy to check the translations for completeness and correctness.



The right column is the properties section.



- **Page id** is the unique identifier of the page in the database. You can't change it. It provides useful information for your administrator.
- **Page name and page code** can only be edited in the list view.
- **Use as stimulus and link stimulus** are explained in the info-box below.
- **Comments** are free text and can be used to store any useful information about the page.

What is a Stimulus?

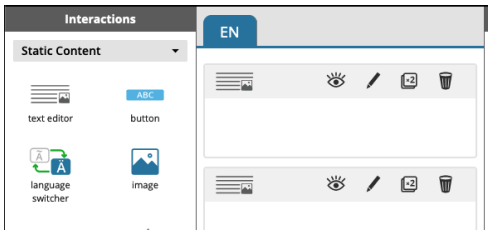
A stimulus is a piece of static content that can be linked to any page **within the same page group**.
For example, in a math test you may have a diagram for which you want to create several tasks. The tasks are to be spread over multiple pages of the test. You can create the diagram as a stimulus, and easily embed it into the pages containing the tasks.

- Create a new page within your page group.
- Open it for editing and check **Use as stimulus** in the properties section.
- Insert your content and save.
- Open (or create) a page containing the task where you want the stimulus to appear.
- In the properties section, go to the dropdown **Link stimulus**.
- Choose the stimulus from the dropdown list.

Note: If you change the content of a stimulus, it will change on all pages where the stimulus is used!

4.3 Interactions

Interactions represent the content items of test pages. You can access them by opening a Page in edit mode. The left panel shows all interactions available.



You can add an interaction to your page by simply clicking and dragging it into the middle column. The middle column represents the content of your page.
You can change the **order of the interactions** on your page by dragging them up and down.
Edit an interaction by clicking on the pen icon.

4.3.1 Static Content

Static content items are not literally interactions. They can be related to tasks but don't contain input options for test takers.

4.3.1.1 Text Editor

The text editor produces a static block of text. The functionality is quite close to what you are used to from your preferred text processing software.

Text Formatting
Text formatting in the OASYS text editor works similarly to text formatting in most word processing programs. Select a chunk of text and then apply the desired format by choosing it from the menu. As the text is intended to be displayed in a browser, the formatting options are limited to web standards.

Menu Edit
Contains the standard options of Undo/Redo, Cut, Copy and so on.
An important option is **Paste as text**.

Pasting Text

A common use case is having text in some document format and copying it into the text editor. The default for pasting is **'Paste as text'** which means no formatting from the document is retained when pasting. Desired formatting can then be applied using the editor's tools. The reason for this is that formatting from document formats is usually not compatible with formatting for web display.
It is possible to disable 'Paste as text,' but this is not recommended unless you have basic knowledge of HTML and CSS!

Menu Insert

Contains the option **'Insert image'**. When you click 'Insert image' or, alternatively, the image icon in the toolbar, the media browser opens.
For detailed information, please refer to the description of the media manager: Page Groups

Menu View

- **Show Invisible Characters** turns on/off showing hidden characters like spaces.
- **Show Blocks** turns on/off showing blocks like paragraphs or headings. This can be helpful, for example, to identify empty paragraphs.

Tables

You can create a table by **clicking 'Table'** in the menu, **click the table icon in the toolbar** or **choose 'Table' from the right-click menu**.
Hover over the 'Table' item and use the grid to draw your table.
To adjust or format your table, click somewhere within the table. A small context menu will appear.

You can access the general **table properties** from this context menu, from the 'table' menu item or from the table icon in the toolbar.

- **Width and height** can be specified in % or in px.
- **Cell spacing** is the space between cells.
- **Cell padding** is the space between the cell and its content.
- **Border** specifies the width of the border.
- **Caption** activates a caption on top of the table.
- **Alignment** defines the alignment of the table within its container.
- **Class:** a class is a predefined format. OASYS provides the class 'striped' which applies different background colors to odd and even rows.
- The **Advanced tab** provides options for border style and color and for the background color.

Cell properties can be accessed from the right click menu, the menu or the toolbar.
Please keep in mind not to make conflicting entries in different cells of the table.

- **Width and height** can be specified in % or in px.
- **Cell type** is used to make cells into headers, as opposed to cells that contain data.
- **Scope** defines what a header cell is associated to.
- **Horizontal Align** specifies the horizontal alignment of the cell's content.
- **Vertical Align** specifies the vertical alignment of the cell's content.
- The **Advanced tab** provides options for border width, border style and color and for the background color.

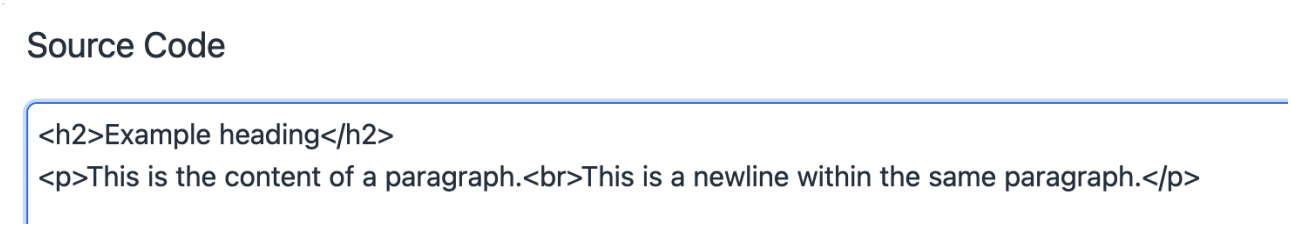
Rows can be accessed from the right click menu, the menu or the toolbar.
From there, rows can be inserted, deleted, cut/copied and pasted.
Row properties give you the possibilitiees to

- specify the row type as body (a row containing data), header or footer.
- specify the alignment of the content.
- specify a fixed height.
- The **Advanced tab** provides options for border width, border style and color and for the background color.

Columns can be accessed from the right click menu, the menu or the toolbar.
From there, rows can be **inserted, deleted, cut/copied and pasted**.

Menu Tools

The tools menu contains only one option: **'Source code'** which is one of the advanced features.
Clicking this option opens a window where you can check and edit the HTML source code of your text block.
HTML (HyperText Markup Language) is the standard language used to structure content on the web. It defines the elements on a webpage, such as headings, paragraphs, links, images, and more, providing the foundation for all web content.



HTML source code example

Typically, there is no need to work with source code. However, if the options provided by the editor's menu are insufficient in special cases, you will need knowledge of HTML and CSS. The internet offers a wide range of tutorials and documentation for this purpose.

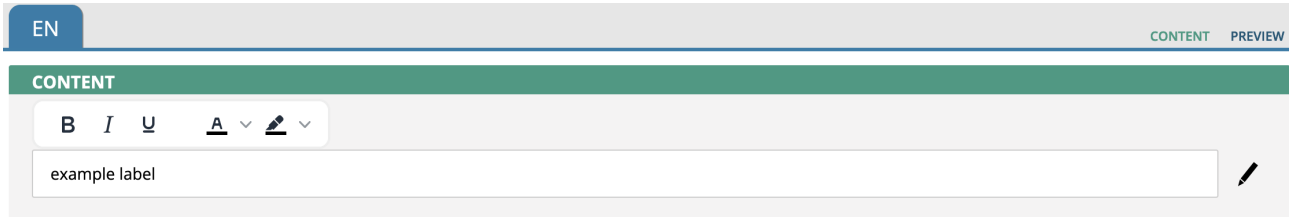
Properties

The properties column of a text editor only has one section: scripting. Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.1.2 Button

The button interaction creates a simple, clickable button to which a range of predefined actions can be assigned.

Label
The label of the button can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.



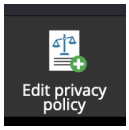
Label editing

In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Preview
Provides a simple preview of the button. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Properties
You can specify
text alignment to define the alignment of the button on your page.
action to define what the button will do when clicked.

- **end test** closes the test. After that, the test won't be accessible any longer with the same login/password combination.
  This action can be combined with the option to **disable button when test is incomplete.**
- **return to login screen** redirects to the login screen when clicked. The test will still be accessible with the same login/password combination.
- **go to next page** navigates to the next page of the test.
- **go to previous page** navigates to the previous page of the test.
- **popup legal text** displays the privacy policy text of the test.



To edit or create a privacy policy text, go to the test and click the button in the top bar.

Scripting gives you the ability to set a visibility condition for the button, meaning a condition that must be met for the button to be displayed. Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.1.3 Language Switcher

As a platform designed for multilingual tests, OASYS automatically provides a language switcher within a test's navigation bar as soon as more than one language is activated. If you are using a design template for your test which has a reduced navigation bar, you can add a language switcher to your pages. It will automatically display a choice of all languages available in your test.

Properties
You can specify
text alignment to define the alignment of the language switcher dropdown on your page.
scripting gives you the ability to set a visibility condition for the button, meaning a condition that must be met for the button to be displayed. Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.1.4 Image

This content allows you to create a block with a single image.

The select file button
Opens the media browser. Unlike the text editor's media browser, you will not get any formatting options.
The **width** of the image can be set within the interaction, below the select file button. The height of the image is then automatically set while maintaining the aspect ratio.

Allowed file types:

- JPEG (.jpg, .jpeg)
- PNG (.png)
- GIF (.gif)
- SVG (.svg)
- WEBP (.webp)
- AVIF (.avif)

For detailed information, please refer to the description of the media manager: Page Groups

Preview
Provides a simple preview of the image. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Properties
You can specify
alignment to define the alignment of the image on your page.
scripting gives you the ability to set a visibility condition for the image, meaning a condition that must be met for the image to be displayed. Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.1.5 Video

This content allows you to create a block with a single video.

The select file button

Opens the media browser in video library mode. There, you can upload a video or select one of the videos already available within the same Page Group.
Please note that any uploaded media files are always only available within a single Page Group!
Videos can't be scaled. Please care for the right dimensions before uploading.
Allowed file types:

- MP4 (.mp4)
- M4V (.m4v)
- WEBM (.webm)

For detailed information, please refer to the description of the media manager: Page Groups

Properties

The use of videos in OASYS goes beyond that of a simple media element. Videos can be functionally integrated into tests. There are a variety of settings that allow processes in tests to be controlled through videos.

- **Interaction id**
  As test results are stored in form of variable name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **Limit play count**
  By activating this option, you can set a maximum of times the test taker can play the video.
  If you set a limited play count for a video, the test results will contain information on how often the video was played.
  This option will **automatically disable the controls** of the video player. It cannot be used along with enabled controls!
  Don't use placeholder: As a default, OASYS will replace the video player with a placeholder after the maximum play count is reached. When this option is enabled, no placeholder is displayed, and the video player is removed from the page. As a result, the content below the player automatically moves up.
- **Disable controls** will remove the default playback controls of the video player.
- **Play automatically** starts the video playback as soon as the test page is loaded.
- **Must be played** prevents the test taker from navigating to the next test page before the video is completely played.
- **Proceed after playing** automatically redirects to the next test page after the video playback has finished.

Scripting gives you the ability to set a visibility condition for the video, meaning a condition that must be met for the video to be displayed. Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.1.6 Audio

This content allows you to integrate a single audio element in a page.

The select file button

Opens the media browser in audio library mode. There, you can upload an audio file or select one of the audios already available within the same page group.
Please note that any uploaded media files are always only available within a single Page Group!
Allowed file types:

- MP3 (.mp3)
- WAV (.wav)
- AAC (.aac)
- M4A (.m4a)
- WEBM audio (.webm)

For detailed information, please refer to the description of the media manager: Page Groups

Properties

The use of audios in OASYS goes beyond that of a simple media element. Audios can be functionally integrated into tests. There are a variety of settings that allow processes in tests to be controlled through audios.

- **Interaction id**
  If you set a limited play count for an audio, the test results will contain information on how often the audio was played. As test results are stored in form of variable-name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **Limit play count**
  By activating this option, you can set a maximum of times the test taker can play the audio.
  This option will **automatically disable the controls** of the audio player. It can not be used along with enabled controls!
  Don't use placeholder: As a default, OASYS will replace the audio player with a placeholder after the maximum play count is reached. When this option is enabled, no placeholder is displayed, and the audio player is removed from the page. As a result, the content below the player automatically moves up.
- **Disable controls** will remove the default playback controls of the audio player.
- **Play automatically** starts the audio playback as soon as the test page is loaded.
- **Must be played** prevents the test taker from navigating to the next test page before the audio is completely played.
- **Proceed after playing** automatically redirects to the next test page after the audio playback has finished.

scripting gives you the ability to set a visibility condition for the button, meaning a condition that must be met for the audio player to be displayed. Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.2 Simple Interactions

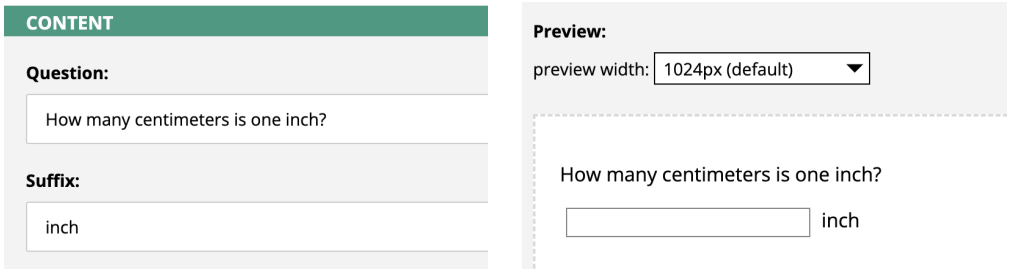
Simple Interactions provide input options for test takers. You can think of a simple interaction as a question with an answer option. The answer given in the test is then stored in the test results. Inline interactions offer the same possibilities but are tasks based on flowing text.

4.3.2.1 Text Field

The text field interaction provides a single line input

Question
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

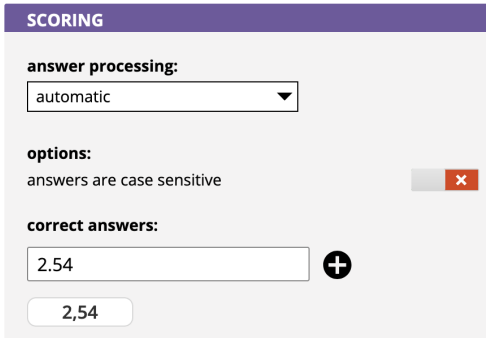
Suffix
A suffix is a text which will be shown behind the input text field. You can use it, for example, for specifying units.



Preview
Provides a simple preview. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Scoring
Scoring refers to the ability to assign points to an interaction in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.
- **Automatic:** OASYS will automatically process the answer given and calculate the score.



When choosing automatic processing, you'll need to provide one or more correct answers.
options: Activate, if you want the answers to be evaluated case sensitive.
correct answers: Type a correct answer in the text field. Then click the plus sign to add it.

The provided answers will be evaluated exactly as given. Keep in mind to add all possible correct answers!

Properties

The properties section of a text field consists of three areas. Content, Scoring and Scripting.

- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in form of variable name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **options**
  - **mandatory field**
    The field can be set to **mandatory**. If an input is mandatory, it prevents from proceeding to the next test page as long as it is left blank.
  - **character limit**
    Here you can define the maximum number of characters that can be entered.
- **textfield size**
  Can be set to one of the presets or to a custom value.
  Custom values must be set with CSS units. CSS is the language used for formatting commands in the browser. Valid units are px and %. 100px sets the width to 100 pixels, 100% sets the width to 100 percent of the available space.
- **input filter**
  Defines the type of input the field accepts.
  It can be set to one of the presets or to a custom filter.
  Custom filters require a basic knowledge of regex (regular expressions), a pattern-matching language used to search, match, and manipulate text based on defined rules and character sequences. The syntax for OASYS follows the JavaScript implementation.
  Further information can be found, for example, here:
  https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Regular_expressions.
- **scoring**
  Is only available if **answer processing** is set to manual or automatic. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.
  Automatic answer processing provides more options. Negative values are accepted.
  - **initial points:** The number of points the task starts with.
  - **correct answer:** The number of points for a correct answer.

  - **wrong answer:** The number of points for a wrong answer.
  - **missing answer:** The number of points for a missing answer.

- **scripting**
  Export as global variable makes the given answer available on other pages of the same test.
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.2.2 Text Area

The text area interaction provides a multiline input

Question
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Preview
provides a simple preview. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Scoring
Scoring refers to the ability to assign points to a task in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.
- **Automatic:** Not available for text areas as they can contain free text. For automatic scoring of text, please use text fields.

Properties
The properties section of a text field consists of three areas. Content, Scoring and Scripting.

- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in the form of variable name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **options**
  - **mandatory field**
    The field can be set to **mandatory**. If an input is mandatory, it prevents proceeding to the next test page as long as it is left blank.

  - **character limit**
    Here you can define the maximum number of characters that can be entered.

- **textarea size**
  can be set to one of the presets or to a custom value.
  Custom values must be set with CSS units. CSS is the language used for formatting commands in the browser. Valid units are px and %. 100px sets the width to 100 pixels, 100% sets the width to 100 percent of the available space.

- **resizability**
  defines the directions in which the textarea can be resized.
  The default is fixed size, i.e. the textarea can't be resized in the browser.

- **scoring**
  Is only available if **answer processing** is set to manual. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter the **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.

- **scripting**
  Export as global variable makes the given answer available on other pages of the same test.
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.2.3 Choice

The choice interaction provides a single set of a question and several choices. It covers both single and multiple choice. The choice type can be set in the properties section.

Question

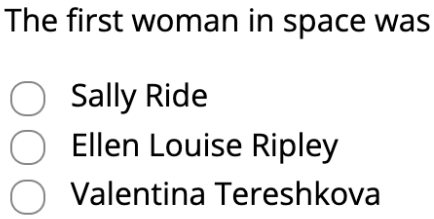
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Choices

There are two methods of adding choices. The **add choice** button and the **import choice labels** button.

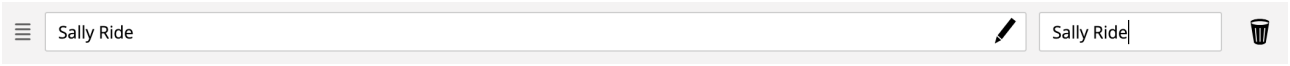
- **add choice**

Each click produces a new choice for the question. Choices can be removed by clicking the trash icon. Choices can be reordered by dragging them up or down with the handle at the very left side.
A choice consists of a label and a value which will be stored as the answer.

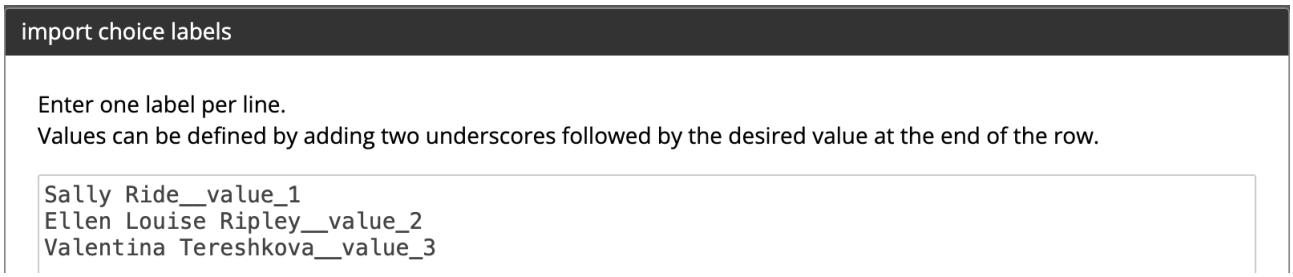


The **label** is the visible part of the choice. It can be edited inline or, if you need formatting, by clicking the pen icon.

The **value** is, what will be stored in the results if the corresponding choice is clicked in a test.
In the above example, clicking **Sally Ride** will store **value_1** as answer.
You can change the value of a choice to whatever you want. In the example below, clicking **Sally Ride** will store **Sally Ride** as answer.



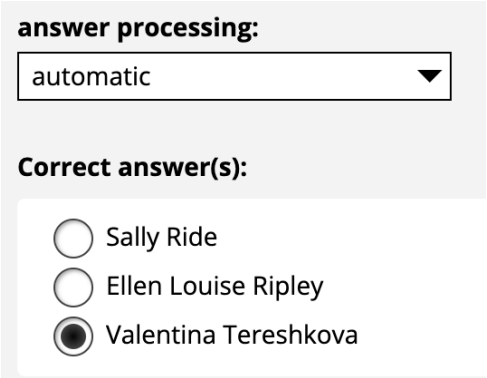
- **add choice labels**
  provides a convenient way to create many choices at once.



Preview
Provides a simple preview of the choice interaction. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Scoring
Scoring refers to the ability to assign points to a task in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.
- **Automatic:** OASYS will automatically process the answer given and calculate the score.



When choosing automatic processing, you'll need to provide the correct answers.
If the choice type is set to **single choice** or **dropdown field**) you can check only one choice as correct.
For a multiple choice, you can mark none up to all choices as correct.

For single choices, there is an additional option: **Consider the following answer as if no answer was given**
This can be used for a choice like **I don't want to answer**. For the scoring properties, this choice will be synonymous with missing answer.

Properties
The properties section of a choice consists of three areas. Content, Scoring and Scripting.

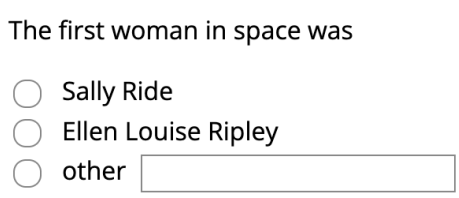
- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in form of variable name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.

- **options**
  The choice can be set to **mandatory**. If an input is mandatory, it prevents from proceeding to the next test page as long as it is left blank.
  The option **go to next page when answered** automatically loads the next page of the test as soon as one choice is checked.

- **choice type**
  With a single choice, exactly one choice can be checked. Checking another choice will automatically uncheck the previously checked one. The dropdown field is a different presentation of a single choice.
  A multiple choice allows none to all choices checked at the same time.

- **choice order**
  can be set to manual (as they are ordered in the choices section), alphabetically or random.

- **custom answer**



Adds a text field to the last choice.
The content of the text field will be added as an extra value to the test results.
For the text field size options, see Text Field

- **layout**
  can be set to vertical, horizontal or a two column layout.

- **label position**
  controls where the label is positioned relative to the checkbox or radio button.
  The show only label option hides the checkboxes or radio buttons and renders a clickable label. You can use this option for **clickable images as choices** if you use the text editor (pen icon) for the label.

- **alignment**
  decides where the choices group is aligned within its container (i.e. on the page).

- **scoring**
  Is only available if **answer processing** is set to manual or automatic. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter the **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.
  Automatic answer processing provides more options. Negative values are accepted.

  - **initial points:** The number of points the task starts with.
  - **correct answer:** The number of points for a correct answer.
  - **wrong answer:** The number of points for a wrong answer.

  - **missing answer:** The number of points for a missing answer.

- **scripting**
  Export as global variable makes the given answer available on other pages of the same test.
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.2.4 Choice Matrix

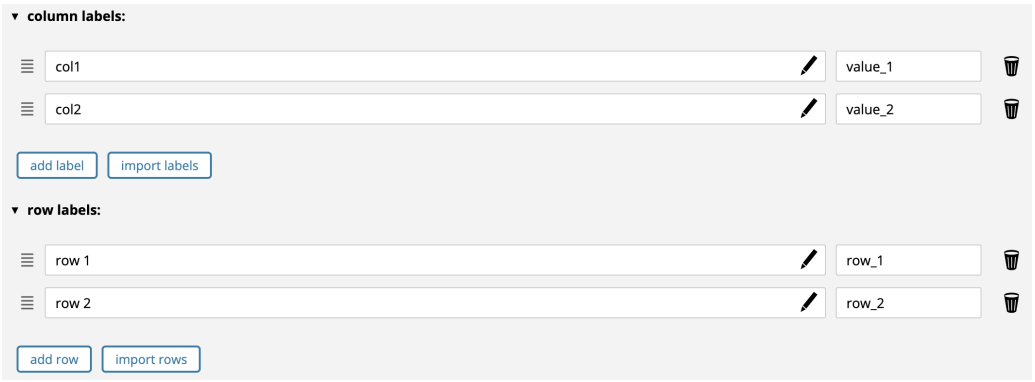
The choice matrix interaction provides multiple sets of choices and a single question in a tabular layout.
This section mainly covers the special features of a choice matrix compared to a choice interaction. For a detailed explanation of choices, please read the section Choice.

Question

There is only one question for the entire matrix. It will be displayed above the tabular layout. It can be understood as an instruction on how to fill in the choices rather than as a question.

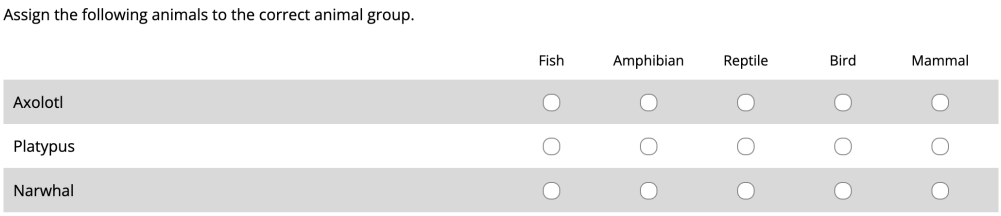
Column Labels and Row Labels

A row defines a set of choices. All rows contain the same set of choices. The choices are defined by the columns.



Column and row setup

The corresponding choice matrix



Example of application

Scoring

Please note that automatic answer processing requires correct answers for every choice/row!

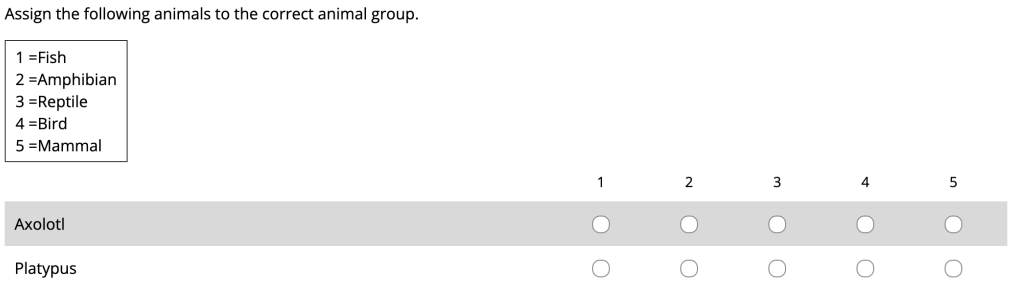
Properties

- **options**
  Mandatory field. If an input is mandatory, it prevents from proceeding to the next test page as long as it is left blank.
  Shuffle rows will display the rows in random order.

- **choice type**
  Unlike with the choice, only single choice (radio button) and multiple choice (checkbox) are available in the choice matrix.
  In case you need dropdown fields you can use multiple simple choice interactions.

- **layout**
  Width of fields sets the width of the column headers, i.e. the choices.
  Min. width of labels sets the minimum width which is reserved for the row labels.
  Adjust both values in order to tweak your layout in case your layout needs space.

- **layout type**
  labels in legend replaces the column headers with numbers and creates a legend.



Labels in legend

- **scoring**
  Works exactly as with the choice interaction. **The same scoring rules apply to every row in the matrix**. That means that, if you set 2 points for the correct answer, the 2 points can be scored per row. 4 rows with a maximum of 2 points make a total of 8 points for the whole choice matrix.

4.3.2.5 Slider

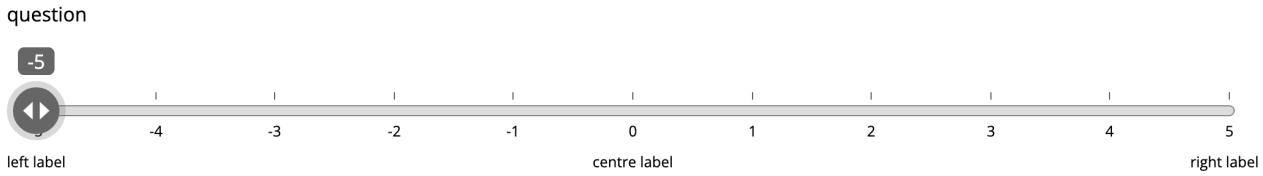
The slider interaction is an interactive element that allows test takers to select a value from a continuous or discrete range by dragging a handle along a track. It is typically used for rating scales, numerical inputs, or preference selection when a more granular response is needed than fixed-choice options like radio buttons or checkboxes.

Question
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

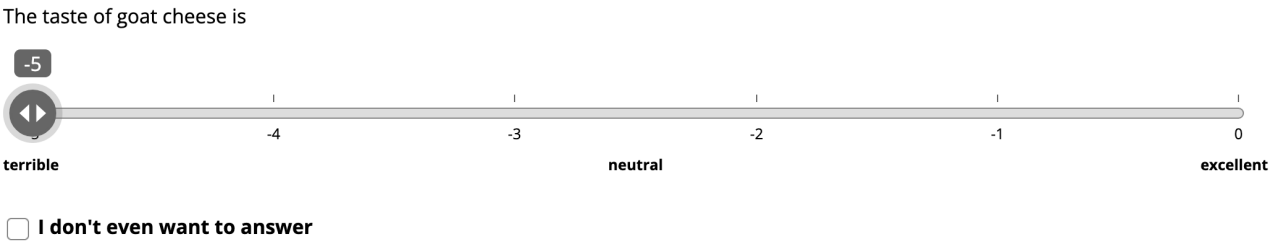
Left label
Labels the left side of the slider. It has the same editing possibilities as the question.

Centre label
Labels the middle of the slider. It has the same editing possibilities as the question.

Right label
Labels the right side of the slider. It has the same editing possibilities as the question.



Labels and question



Application example including the "no reply" option described below

Preview
Provides a simple preview. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Scoring

Scoring refers to the ability to assign points to a task in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.
- **Automatic:** OASYS will automatically process the answer given and calculate the score.
  The **correct answer type** can be set to
  - **single value** (specify one value as correct)
  - **range of values** (specify the start and the end of the range)

Properties

The properties section consists of three areas. Content, Scoring and Scripting.

- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in the form of variable-name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **options**
  - **mandatory** If an input is mandatory, it prevents proceeding to the next test page as long as it is left blank.
  - **show "no reply" option** Creates a checkbox below the slider. This option leads to an additional label in the content section. If the "no reply" checkbox is checked, OASYS considers the interaction as answered. (See illustration of application example above.)
- **slider values**
  - **minimum value** specifies where the slider starts. Can be set to negative values.
  - **maximum value** specifies where the slider ends. Can be set to negative values. You'll get an error when trying to set it to a value less than the start value.
  - **values interval** sets the steps by which the slider can be dragged. Accepts only positive integers.
- **layout**
  - **Show steps** hides or shows the stepmarks **and** the values on the slider.
  - **Show value of each step** shows or hides the values below the stepmarks. This option is not available if show steps is unchecked.
  - **Show value over handle** hides or shows the bubble with the current value which is placed right above the slider's handle.
- **scoring**
  Is only available if **answer processing** is set to manual or automatic. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.
  Automatic answer processing provides more options. Negative values are accepted.

- **initial points:** The number of points the task starts with.
- **correct answer:** The number of points for a correct answer.
- **wrong answer:** The number of points for a wrong answer.
- **missing answer:** The number of points for a missing answer.

- **scripting**
  Export as global variable makes the given answer available on other pages of the same test.
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.2.6 Slikert

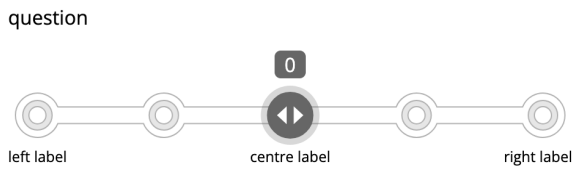
The slikert interaction is a slider based implementation of a likert scale.
A Likert scale is a common rating scale used in surveys and assessments to measure attitudes, opinions, or perceptions. It consists of a series of statements where respondents indicate their level of agreement, frequency, or satisfaction on a graded scale, typically ranging from "Strongly Disagree" to "Strongly Agree" or "Never" to "Always."

Question
The questionn can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Left label
Labels the left side of the slikert. It has the same editing possibilities as the question.

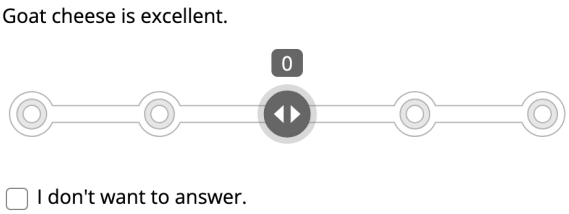
Centre label
Labels the middle of the slikert. It has the same editing possibilities as the question.

Right label
Labels the right side of the slikert. It has the same editing possibilities as the question.



Labels and question

Preview
provides a simple preview. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.



Application example including the "no reply" option described below

Scoring

Scoring refers to the ability to assign points to a task in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.
- **Automatic:** OASYS will automatically process the answer given and calculate the score.
  The **correct answer type** can be set to
  - **single value** (specify one value as correct)
  - **range of values** (specify the start and the end of the range)

Properties

The properties section of a slikert consists of three areas. Content, Scoring and Scripting.

- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in form of variable name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **options**
  - **mandatory** If an input is mandatory, it prevents from proceeding to the next test page as long as it is left blank.
  - **show "no reply" option** Creates a checkbox below the slider. This option leads to an additional label in the content section. If the "no reply" checkbox is checked, OASYS considers the interaction as answered. (See illustration of application example above.)
  - **Show tooltip** hides or shows the bubble with the current value which is placed right above the slider's handle.
- **slikert values**
  - **minimum value** specifies where the slikert starts. Can be set to negative values.
  - **maximum value** specifies where the slikert ends. Can be set to negative values. You'll get an error when trying to set it to a value less than the start value.
  - **values interval** sets the steps by which the slikert can be dragged. Accepts only positive integers.

- **slikert origin**
  The slikert has two different background colors, depending on the currently chosen value. Red indicates disagreement, green indicates agreement. The slikert origin sets the range for those colours.
  - **Left:** The entire range will be green.
  - **Centre:** The left half will be red, the right half will be green. This represents the default range of disagreement and agreement.
  - **Right:** The entire range will be red.
  - **None:** No background color will be shown.
- **Position of labels**
  - **None:** No labels will be shown.
  - **On both sides:** The left label will be shown left of the slider, the right label right of the slider. The centre label will be omitted.
  - **Below (left, centre, right):** The labels will be shown below the track of the slikert.
- **scoring**
  Is only available if **answer processing** is set to manual or automatic. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.
  Automatic answer processing provides more options. Negative values are accepted.
  - **initial points:** The number of points the task starts with.
  - **correct answer:** The number of points for a correct answer.
  - **wrong answer:** The number of points for a wrong answer.
  - **missing answer:** The number of points for a missing answer.
- **scripting**
  Export as global variable makes the given answer available on other pages of the same test.
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.3 Inline Interactions

Inline interactions are OASYS implementations of cloze tasks.
Cloze tasks are fill-in-the-blank exercises where learners complete missing words or phrases in a text. In drag-and-drop cloze, users drag answers into blanks; in write-inline cloze, they type answers directly into the blanks.

4.3.3.1 Text Fields

The text fields interaction is the OASYS implementation of a Fill-In-The-Gaps question.
A Fill-in-the-Gaps question is a type of assessment where respondents complete a sentence or statement by providing missing words or phrases. Instead of selecting from predefined options, test takers manually enter their answers into blank spaces.

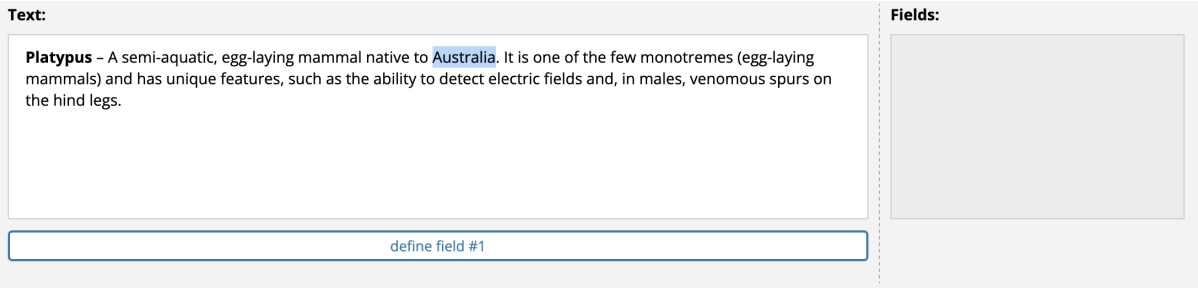
Question
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Text
Here you enter the complete text. In a first step without the gaps.

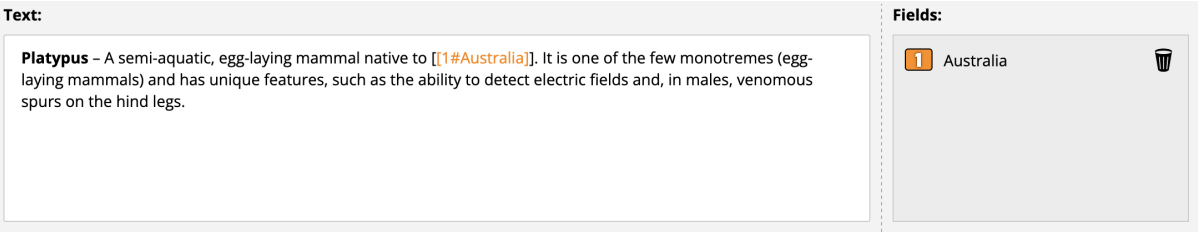
Fields
The overview of fields which are defined as gaps. This is a read-only field.

Creating Gaps

In order to create a gap, first select the text where the gap should be.



Below the text, the define field button appears. Click it.



The selected text will be wrapped in a bracket structure. In the fields list, the gap will appear. The numbers correspond to the order of creation, not to the order in the text. You can delete a gap by clicking the trash icon next to it. (Don't worry about the numbers. OASYS doesn't need a sequential numbering for gaps.)

Platypus – A semi-aquatic, egg-laying mammal native to _____. It is one of the few monotremes (egg-laying mammals) and has unique features, such as the ability to detect electric fields and, in males, venomous spurs on the hind legs.

The result of the above will look like this.

Preview

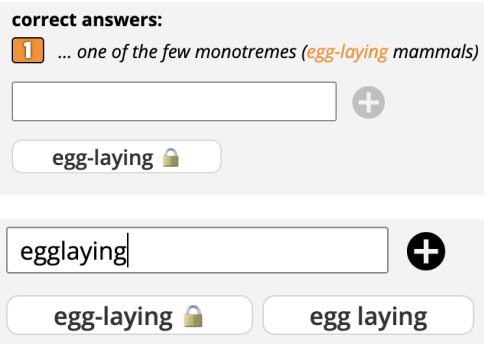
shows the gaps **with the correct solution in orange**. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Scoring

Scoring refers to the ability to assign points to a task in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.

- **Automatic:** OASYS will automatically process the answer given and calculate the score.
  - You can check the **option**, that answers will be evaluated case sensitive. The default is case insensitive.
  - Correct answers
    The list of correct answers represents the existing gaps.



The selection from the gap creation is already set as the correct answer and cannot be changed or deleted at this point. You can add more correct answers by filling in the text field and clicking the plus-icon.

Properties

The properties section of a text field consists of three areas. Content, Scoring and Scripting.

- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in form of variable name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **options**
  - **mandatory** If an input is mandatory, it prevents from proceeding to the next test page as long as it is left blank.
  - **textfield size**
    defines the size of the gaps.
    It can be set to one of the presets or to a custom value.
    Custom values must be set with CSS units. CSS is the language used for formatting commands in the browser. Valid units are px and %. 100px sets the width to 100 pixels, 100% sets the width to 100 percent of the available space.
  - **input filter**
    defines the type of input the field accepts.
    It can be set to one of the presets or to a custom filter.
    Custom filters require a basic knowledge of regex (regular expressions), a pattern-matching language used to search, match, and manipulate text based on defined rules and character sequences. The syntax for OASYS follows the JavaScript implementation.
    Further information can be found, for example, here: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Regular_expressions.
- **scoring**
  Is only available if **answer processing** is set to manual or automatic. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.
  Automatic answer processing provides more options. Negative values are accepted.
  - **initial points:** The number of points the task starts with.

  - **correct answer:** The number of points for a correct answer.
  - **wrong answer:** The number of points for a wrong answer.
  - **missing answer:** The number of points for a missing answer.

- **scripting**
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.3.2 Gaps

Gaps is the OASYS implementation of a Drag-and-Drop Cloze.
This type of question provides a set of predefined words (usually in a word bank) that test takers can drag into the appropriate blanks in a sentence or paragraph. It is commonly used in language learning, vocabulary exercises, and interactive assessments.

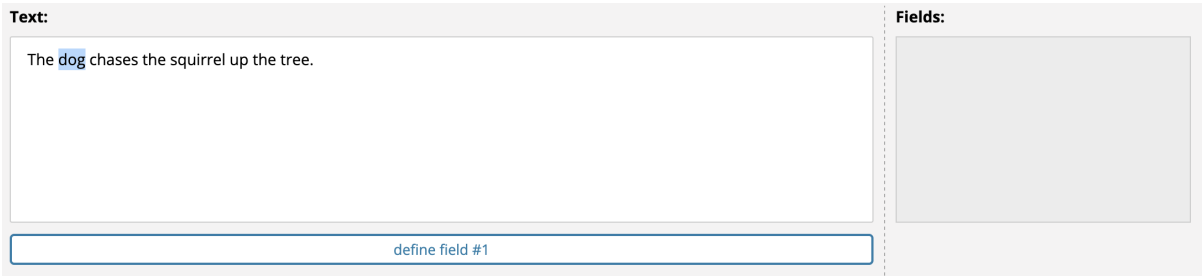
Question
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Text
Here you enter the complete text. In a first step without the gaps.

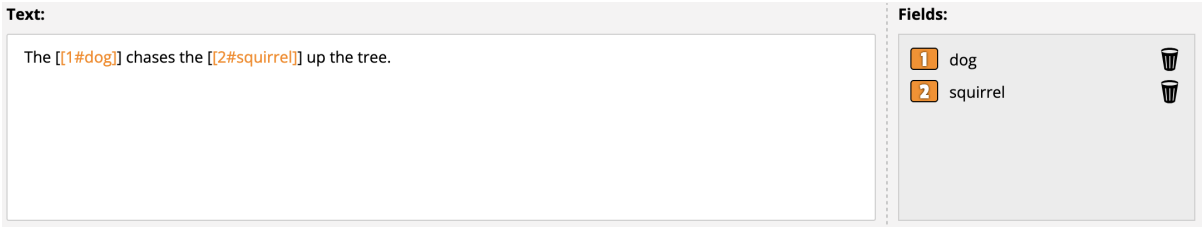
Fields
The overview of fields which are defined as gaps. This is a read only field.

Creating Gaps

In order to create a gap, first select the text where the gap should be.



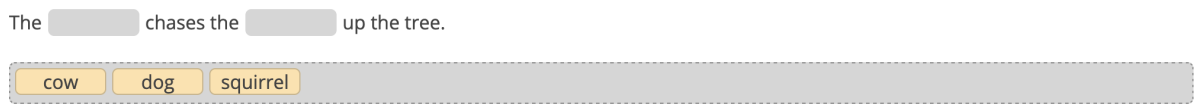
Below the text, the define field button appears. Click it.



The selected text will be wrapped in a bracket structure. In the fields list, the gap will appear. The numbers correspond to the order of creation, not to the order in the text. You can delete a gap by clicking the trash icon next to it. (Don't worry about the numbers. OASYS doesn't need a sequential numbering for gaps.)

In the answer options section the gaps with the selected words will appear. You can edit them in place.

Clicking the add distractor button adds additional words to the word bank which are not rerpresentations of gaps but can be dragged into them.



The result of the above will look like this.

Preview
shows the gaps and the word bank. For an accurate preview in the context of the page, please use the "Preview page" button in the top bar.

Scoring
Scoring refers to the ability to assign points to a task in the test. OASYS offers three modes for scoring a task. **Depending on the scoring mode, the parameters in the properties section will change!**

- **None:** No points are assigned. OASYS will store the answer but can't use the answer for scoring.
  Properties: none
- **Manual:** This sets up the ability to assign points during the grading of a test within OASYS. The actual point allocation is done manually. The final result can be calculated by OASYS.
  Properties: maximum points. The actual score achieved is entered during the grading of the test.
- **Automatic:** OASYS will automatically process the answer given and calculate the score.

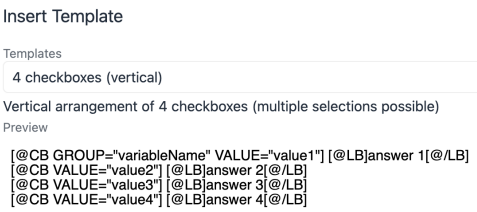
Properties
The properties section of a text field consists of three areas. Content, Scoring and Scripting.

- **Interaction id**
  The interaction id is an internal identifier for the interaction. **It makes an interaction available for scripting.** As test results are stored in the form of variable-name = value, the interaction id represents the variable name. If you don't set it, OASYS will automatically generate it.
- **options**
  - **Mandatory** If an input is mandatory, it prevents proceeding to the next test page as long as it is left blank.
  - **Answers order**
    Defines the order of the words in the word bank.
    Manual: As created when defining the gaps.
    Alphabet: In alphabetical order.
    Random: In random order.
- **scoring**
  Is only available if **answer processing** is set to manual or automatic. If it is set to none, you won't be able to score the interaction within OASYS.
  Manual answer processing provides the option to enter **maximum points**. Only positive values are allowed. The input accepts steps of 0.5.
  Automatic answer processing provides more options. Negative values are accepted.
  - **initial points:** The number of points the task starts with.
  - **correct answer:** The number of points for a correct answer.
  - **wrong answer:** The number of points for a wrong answer.
  - **missing answer:** The number of points for a missing answer.
- **scripting**
  Visibility condition gives you the ability to set a condition under which the interaction is displayed.
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.

4.3.4 Advanced Editors

4.3.4.1 Advanced Editor

The Advanced Editor enables the representation of all OASYS interactions. Additionally, extended functionalities can be utilized, such as complex layouts or drag-and-drop interactions.
The editor opens with the same interface as the Text Editor. Interactions and functionalities are integrated via keywords.
Documentation can be found in the appendix of this manual.



For reasons of convenience, the advanced editor offers the possibility to insert code snippets via menu.
Go to the **insert menu** and select **insert template**.
You can choose one of the available snippets from a dropdown list.

4.3.4.2 Concept Map

A concept map is a visual representation of relationships between ideas, concepts, or pieces of information. It consists of nodes (representing key concepts) connected by lines or arrows that indicate relationships. Concept maps help organize and structure knowledge, making complex topics easier to understand.
A concept map can be used as an assessment task by requiring learners to organize and connect key concepts based on their understanding. This can be done in several ways:

- **Fill-in-the-Blanks Concept Map**
  Test Takers complete a partially completed concept map by filling in missing concepts or relationship labels.
- **Create-Your-Own Concept Map**
  Learners build a concept map from scratch using given or self-selected concepts, demonstrating their understanding of relationships.

Question

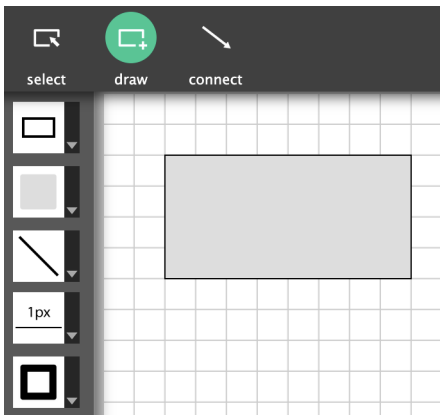
The question can be edited inline (just click within the textfield) with a simple set of formatting options which open in a flyout menu.
In case the simple options of inline editing are not sufficient, click the pen icon on the right. An editor similar to the text editor interaction will open. For a description of its functionalities, please refer to the section Text Editor

Open Concept Maps Tool

Clicking the button opens the concept maps tool as an external editor.
The **top toolbar** contains two sections. On the left there are the **drawing and selecting tools**. The right contains **general tools**.
The **sidebar** contains the **property tools**. With their help, specific properties like color or line-style can be applied to shapes and connectors.
The center part of the interface is the **canvas** where you draw your map.

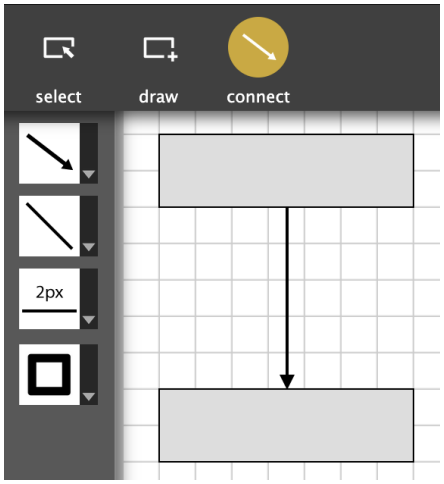
Draw, Select And Connect

- **Draw**



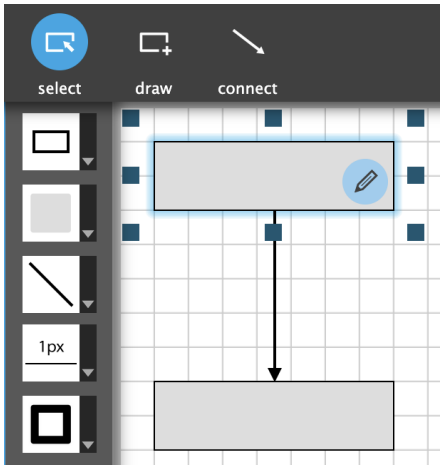
When the drawing tool is activated, a click on the canvas creates a shape according to the current values in the properties section.
Initially, the shape is of a predefined size and without a label.
If you want to add a label, change its size or properties, you'll have to select it first.

- **Connect**



With the connect tool activated, you can connect two existing shapes (which are not yet connected).
The style of the connector is according to the current values in the properties section.
Initially, the connector is without a label.
If you want to add a label or change its properties, you'll have to select it first.
The connection always goes from the middle of the first shape to the middle of the second one. It takes the shortest way. If you move one of the shapes, the connection will adapt to the new place.

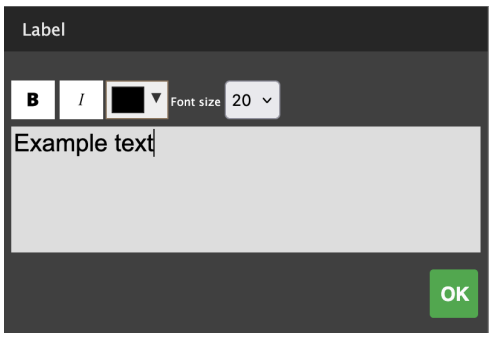
- **Select**



With the select tool activated, you can select one or multiple shapes or connectors.
A single click on it selects a single object.
Hold the shift-key to select or unselect further objects.
You can do a multiselection by clicking on the canvas and drag a frame around the objects you want to select.

When an object is selected you can

- **drag and resize it**
  Click and hold the mouse button to drag shapes. Note that connectors are not draggable but self adapting!
  Use the handles to change the size of a shape.
- **edit its properties**
  Use the tools from the properties section. The property you change will be applied to the selected object.
  The available properties correspond to the type of the selected object or objects. In a multiselection, the change is applied to all selected objects.
- **edit its label**
  This is only available for single selections!
  A click on the blue pen icon within the selected shape opens the label editor.



The label editor is a very basic text editor. Make your changes and confirm to save them.

General Tools

- **Zoom**
  The zoom button opens a slider. You can use it to magnify or minify the view. Please note, that this doesn't change the size of the map. When opened in a test, the map will be at the default zoom level.

- **Delete**
  The delete button deletes the currently selected objects. In order to delete everything on the canvas, use the clear canvas button.

- **Import And Export**
  Standard saving will save the concept map to the current OASYS page. But there is also an option to save a map as a file on your local computer. This can be convenient for sharing or reusing maps in other pages. You can also use them in standalone versions of the concept maps tool.
  Import will always delete the current content of the canvas. Any attempt to import content with an existing map will lead to a warning.
  Export will raise a file-saving dialogue. The existing state of your map won't be touched and you can continue working on your map. Consider this feature as a possibility to backup the current state of your work.

- **Grid**
  The grid button lets you check or uncheck two options.
  Grid visible shows or hides the grid on the canvas.
  Snap to grid makes shapes snap to the next lines of the grid when drawn, resized or dragged. Uncheck it for adjustments below grid level. When you recheck the snap mode, already placed objects won't snap back.

- **Undo And Redo**
  These buttons will undo, respectively redo your last actions. While your map is open, the undo/redo stack is unlimited. Closing the map will delete it.

- **Clear Canvas**
  Clear canvas removes all objects from your map. It also deletes any undo/redo.

- **Lock**
  This is a tool which controls the behaviour of the map when opened in a test.
  If the approach of the task for the test taker is, to let him complete a partially existing map, you might want to prevent the existing parts from being changed.
  Lock content will completely lock the existing content. The test taker can only add to the map.
  Labels editable allows the test taker to add or change labels of the locked objects. This option requires lock content to be checked!
  Locking will have no impact while you are working with your map. It only affects the behavior of the map for the test takers.

- **Show Question**
  This button raises a popup with the question created in OASYS along with the interaction.

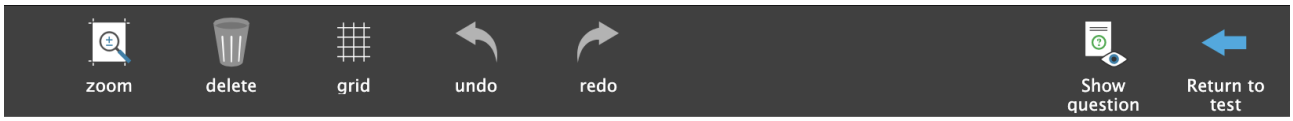
- **Save**
  saves the current state of your map to the OASYS content.

- **Close** closes the concept maps tool and returns to the OASYS content manager.

Differences between editor view and frontend

The editor for creating concept maps in OASYS slightly differs from what a test taker sees while working on a test. Drawing and properties tools are the same, the general tools are less for the frontend.

Editor view



Frontend (test taker) view

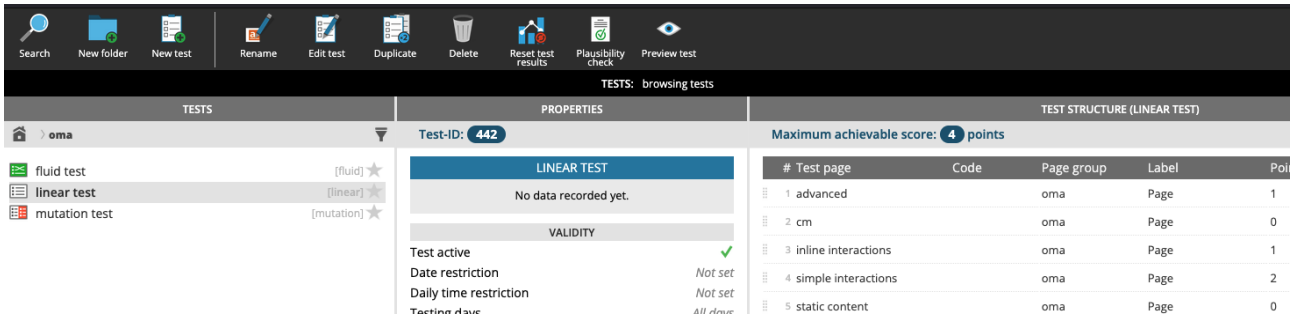
Chapter 5

Tests

In OASYS, tests are assembled from existing test pages. Test content is not created within the test itself, but in the content manager. This means that content can be reused for different tests. On the other hand, it does mean that changing any test page which is in use in one of the existing tests will change the test itself. The attempt to do so will lead to a warning in the content manager.
A practical approach to this is duplicating test pages rather than just reusing them.

5.1 Test Manager

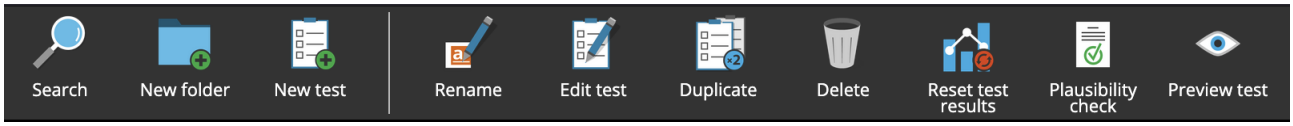
The test manager is the starting point for working with tests. The left column provides an overview of the available tests and folders.



Test manager overview

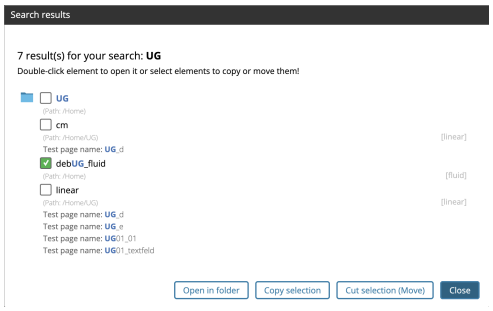
There are three different types of tests:
Linear tests consist of a sequence of test pages.
Fluid tests consist of a sequence of pools of test pages.
Mutation tests consist of a pool of linear tests.
In the overview, the different types have different icons.
Selecting one of the tests shows an overview of its properties and content in the right columns. A click in one of the columns opens the test in edit mode.

5.1.1 Test Manager Menu



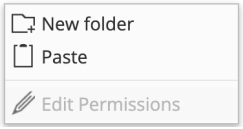
Test manager menu

- **Search**
  Searches the complete test manager for objects with a name containing the search string.



The search results open in a popup.
You can select them by clicking the checkboxes.
Depending on your selection, you have various options.

  - **Open In Folder**
    brings you to the test manager with the selected object selected.
  - **Copy Selection**

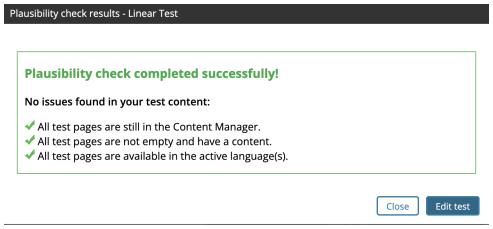


    brings you to the test manager with the selected object in the clipboard.
    Right click within the left column to raise the context menu and choose paste.

  - **Cut Selection (Move)**
    cuts the selection (i.e. removes it from its original place).
    Pasting the object to a new location works exactly as with copy selection.
  - **Close**
    closes the popup.

- **New Folder**
  opens a popup which prompts you for a name for the new folder. The folder will be created in the location which is currently displayed in the left column.
- **New Test**
  opens a popup which prompts you for a name for the new test.
  It will also prompt for the type of test. See sections Linear Tests, Fluid Tests, Mutation Tests
  For a brief explanation click the blue question mark within the popup.
  The test will be created in the location which is currently displayed in the left column.
  Confirming the dialogue will bring you directly in editing mode for the new test.
- **Rename**
  requires a selected object. You'll be prompted to write and confirm the new name.
- **Edit Test**
  requires a selected test. The other way to open a test in edit mode is selecting it and then clicking within the right columns.
- **Duplicate**
  requires a selected test. The test will be duplicated in place with a suffix to its name.
- **Delete**
  deletes the selected object and all its content. **This includes test results!**
- **Reset Test Results**
  deletes all existing results from the selected test. **In case you share this test with coworkers, their results will be deleted, too!**

- **Plausibility Check**
  is only available for linear and fluid tests. **Mutation tests consist of multiple tests which can be checked for plausibility separately.**



The plausibility check performs a search for a set of issues on the test. The button on the right takes you directly to edit mode.
Please note that only technical plausibility is checked. Issues such as missing page content, for example, will not be detected!

- **Preview Test**
  opens the test in a new tab, starting with the first page. In this mode, no results are recorded.

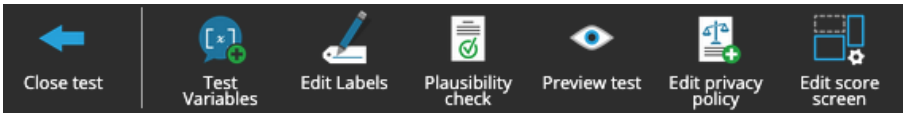
5.2 Linear Tests

A linear test is a type of assessment where all participants receive the same set of questions in a fixed order. Each question follows sequentially, and test takers progress through the test in a predetermined manner without skipping or rearranging questions. This format ensures consistency in evaluation and is commonly used in standardized testing, educational assessments, and certification exams.

Basic workflow for a linear test:

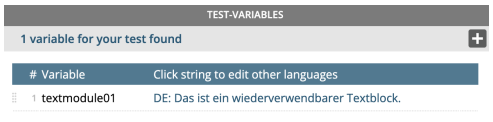
- Create the test.
- Edit its properties.
- Add test pages and order them.
- Adding test takers is covered in the chapter Test Takers

5.2.1 Linear Test Menu

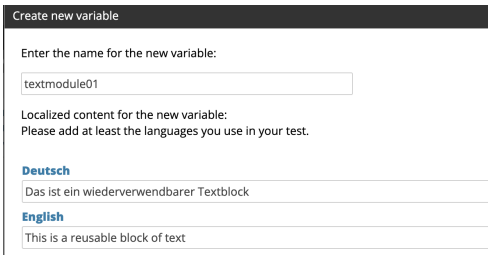


Linear test menu

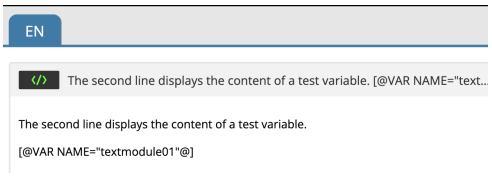
- **Close Test**
  goes back to the list view.
- **Test Variables**
  Opens an editor where you can define text modules under variable names. The variable can be used in the Advanced Editor. In the test, the content of the text module is then displayed.
  Syntax: [@VAR NAME="textmodule01"@]



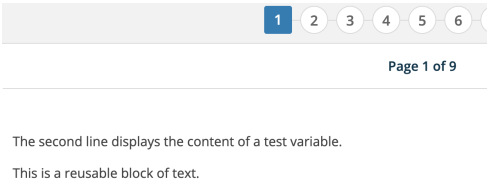
Click the plus sign to add a test variable.



Define a name and provide the translations necessary for the test.



Put an advanced editor interaction in a page you use in your test.
Enter the code for your variable.



On the test page, the content of the variable will be displayed.
Test variables will only work in the test they are defined in!

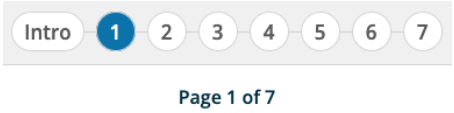
- **Edit Labels**
  opens the label editor.

Labels

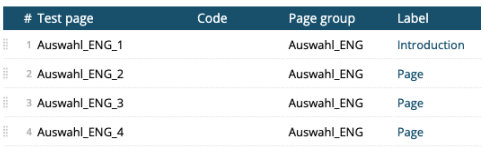
All test pages have so-called labels assigned to them.
Labels serve to guide test takers during the test. They are displayed in the test header and help distinguish, for example, between the introduction or overview and the pages containing questions.
There is a set of predefined labels:

- **Introduction** indicates that the page contains an introduction or introductory explanation of the test.
- **Page** indicates a test page with questions.
- **Test-Index** indicates a page with an overview of the test-content.
- **Closing Screen** indicates the outro of the test, usually containing a thank you message and a closing button.

The label editor offers possibilities to edit the texts and translations for a label as well as the possibility to add new labels to a test.

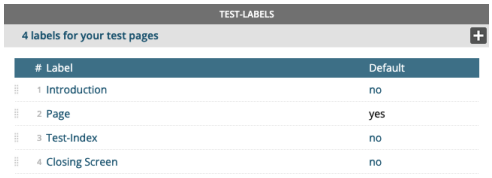


Labels are displayed in the header bar of a test.



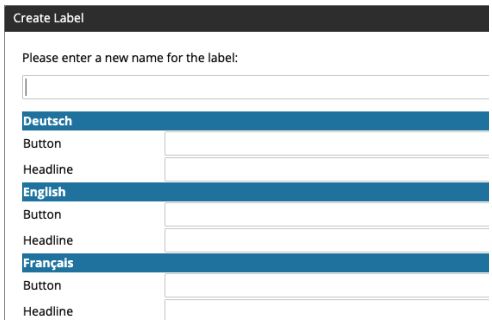
#	Test page	Code	Page group	Label
1	Auswahl_ENG_1		Auswahl_ENG	Introduction
2	Auswahl_ENG_2		Auswahl_ENG	Page
3	Auswahl_ENG_3		Auswahl_ENG	Page
4	Auswahl_ENG_4		Auswahl_ENG	Page

Labels are shown in the test pages list in the right column.
Click on the assigned label to change it.



#	Label	Default
1	Introduction	no
2	Page	yes
3	Test-Index	no
4	Closing Screen	no

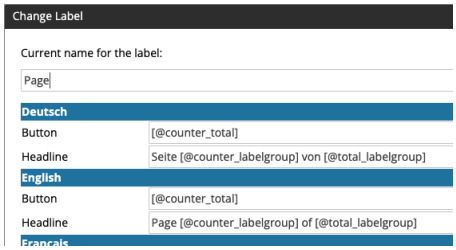
In the label editor, all existing labels are shown. The default column shows, which label is assigned to a page unless you changed it.
The default can be changed by clicking the default-column value next to a label.
When you click the name of a label, you can edit it.



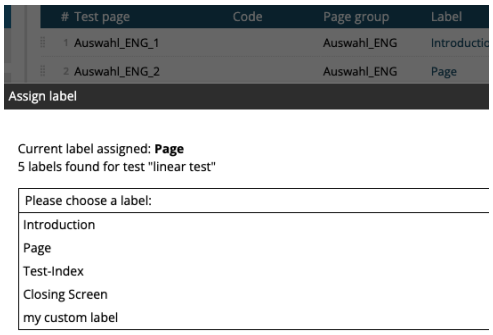
A click on the plus sign opens the dialogue for a new label.
Button represents what is displayed in the navigation list at the very top.
Headline is what is displayed directly below.
Languages you don't use in your test can be left blank.

Labelgroups

Test pages assigned to the same label form so called labelgroups.
Within labels, you can use placeholders placeholders to display page numbers.
Right-click within the text field to get a list of the available placeholders. Click one of them to insert it.
Be aware that there is a difference between the number of pages of the test and the number of pages in a specific labelgroup.
The placeholders always refer to the labelgroup they are used in.

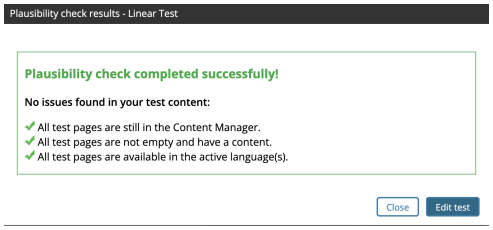


[@counter_total] shows the counter of the current test page.
[@total_total] shows the count of pages in the test.
[@counter_labelgroup] shows the current page number in the labelgroup.
[@total_labelgroup] shows the total count of pages in the labelgroup.



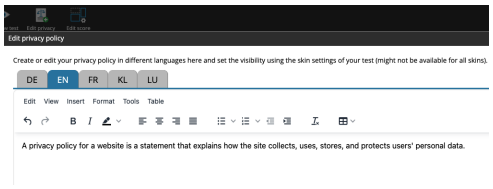
When you are done with editing, **return to the pages list of the test.** You can click on a label in the pages list and assign one of the available labels.

- **Plausibility Check**



The plausibility check performs a search for a set of issues on the test.
The button on the right takes you directly to edit mode.
Please note that only technical plausibility is checked. Issues such as missing page content, for example, will not be detected!

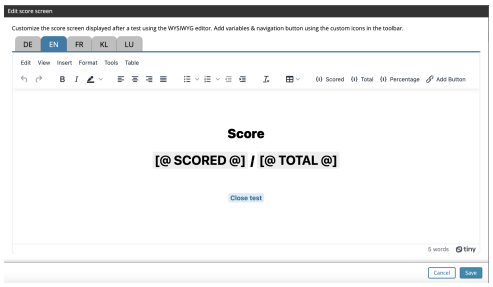
- **Preview Test**
  opens the test in a new tab, starting with the first page. In this mode, no results are recorded.
- **Edit Privacy**



Opens a text editor where you can edit a privacy policy for your test.
For a detailed explanation of the editor see section Text Editor.

The option Privacy Policy Button has to be enabled in the properties section of the test in order to display the policy in the test's menu!

- **Edit Score Screen**
  The option Show Score has to be enabled in the properties section of the test and all interactions of the test need to have automatic scoring!



The score screen can be displayed at the end of an automatically scored test to show the test taker the points they achieved. A default layout exists, which can be edited.
For a detailed explanation of the editor see section Text Editor.

There are placeholders that can be inserted.

- **Scored** shows the number of points the test taker achieved.

- **Total** shows the maximum points of the test.
- **Percentage** shows the percentage of points the test taker reached.
- **Add Button** adds a button which can be set to **Close Test** (returns to the login screen) or **Open URL** (redirects to the given URL).

5.2.2 Linear Test Properties

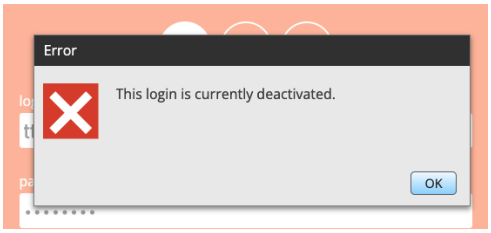
The properties section is located in the left column. The top two entries are for informational purposes.

Test-ID:
The test ID is needed for importing test takers from a CSV file. See chapter Test Takers

Data Recorded:
Information on recorded test results. For information on test results see chapter Test Results

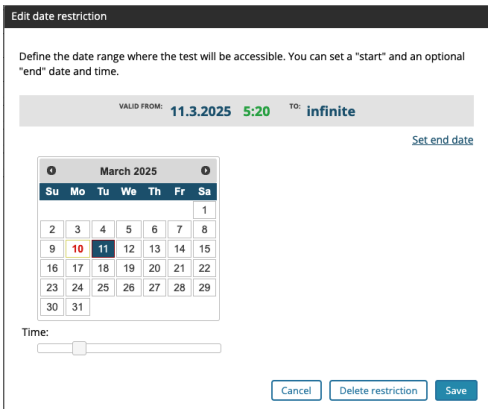
Validity
Validity controls whether and under which time restrictions test takers can log in to the test.

- **Test Active**



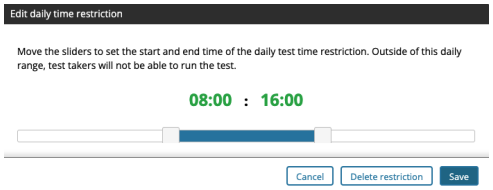
This option deactivates the test. A test taker trying to log in while the test is deactivated receives an error message.

- **Date Restriction**
  Using the date restriction, you can limit the time frame during which test takers can log in to the test.



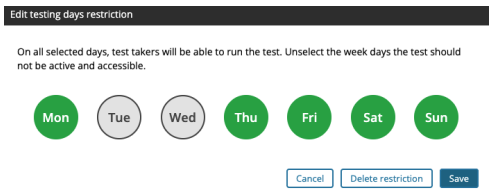
On a calendar, you can set a starting date for the test. Below, you can set a starting time for that day.
If you want to set an end date, click **Set end date** on the right. This will give you a second calendar for choosing an end date and time.
Login attempts outside the time frame will result in an appropriate message.

- **Daily Time Restriction**



Use the slider to set a daily timeframe when the test should be accessible.
If a date restriction is set, this option will work inside the date time frame!

- **Testing Days**

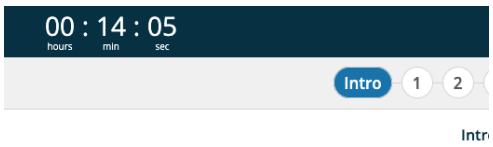


Select the weekdays on which the test should be accessible by clicking.
This works within set date and daily time restrictions!

- **Force Logoff on Inactive Test**
  When a test is deactivated, test takers which are logged in at that moment can complete the test by default.
  Activating this option will immediately log off all test takers when the test is deactivated. An appropriate message is displayed.

Timer

- **Use Timer**



This option limits the time a test taker can spend for the test.
The time is set in full minutes.
A timer is displayed above the navigation bar of the test.

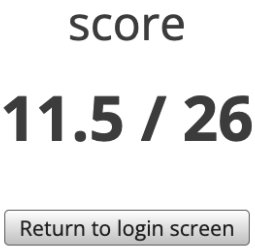
When a test taker logs off, the timer stops. It restarts with the same time left, when the test taker logs in again.
After the time is spent, the test taker won't be able to log in with the same name and password.

Miscellaneous

- **Save Results**
  When save results is disabled, OASYS won't record any test taker's answers. This option can be used for testing purposes or for showcase tests.

- **Limit Navigation**
  When this option is enabled, the test takers can only proceed to the next page. (Provided that all mandatory interactions are answered.)
  The navigation is shown but only highlights the current page instead of being clickable. The previous button is hidden, only the next button is shown.

- **Show Score**



This option requires autoscored interactions!
After the test, a page displaying the score achieved will be shown. This page can be edited using the **'Edit Score Screen'** button."

- **Hide Timeout Message**
  Requires Use Timer to be enabled. When this option is enabled, the timeout message will be omitted and the test taker will be redirected to the login screen after the time for the test is over. If **Show Score** is enabled, the test taker will be redirected to the **results screen**.
- **Wait for media to load**
  If enabled, the test will start as soon as all media is cached (i.e. preloaded).
  Consider this option if your test contains large audio or video files or if the test taker's internet connection might be poor.

Languages

- At least one of the languages must be activated.
- The test pages used must be available in all the languages selected. **Run the plausibility check from the top menu.**
- If you need additional test languages, you can ask the administrator of your OASYS instance to add them in the **Localization** menu.

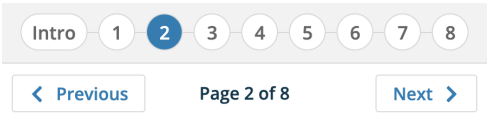
Skin

A skin is a visual theme or design that changes the appearance of the user interface without affecting its functionality. Skins can include custom colors, fonts, layouts, and graphics, allowing users to personalize the look and feel of the software.

- **Change Skin**
  OASYS provides two skins.
  - **Default Responsive**
    includes all navigation elements and additional options.
  - **Minimalistic**
    hides everything but the content of the test pages. It is designed for tests where test takers should not be distracted from the content by additional elements.
    Interactions for this skin must be set up to proceed to the next test page after an answer is given.

  Additional custom skins are possible but require programming knowledge, knowledge of the OASYS application and full access to the installation.
  Depending on the chosen skin additional options are available.
  The following options are available for the OASYS standard skin, default responsive.
- **Show Timer**
  If you are using a timer, it will be displayed in the top bar of the test by default. Uncheck this option to hide the timer.
  The timer will remain active!

- **Show Detailed Navigation**
  Disabling this option replaces the default navigation.
  In the top bar of the test, the line with page labels is hidden.

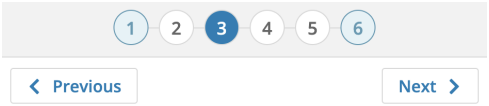


Detailed navigation on.

Detailed navigation off.

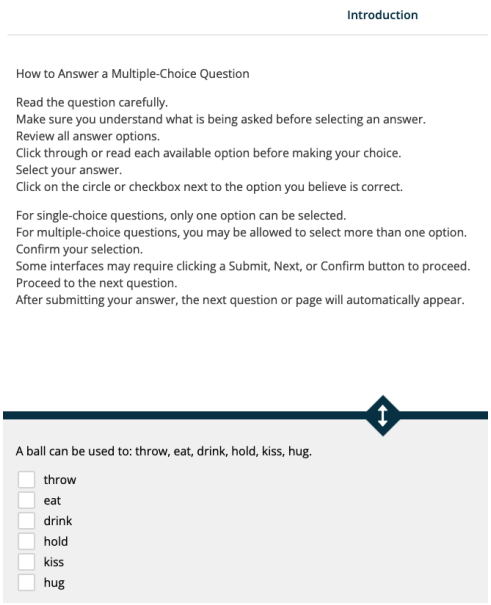
- **Show Simple Navigation**
  Disabling this option will **hide the previous and next buttons** in the navigation.
- **Show Page Labels**
  Disabling this option hides the information on the current page from the navigation.

Show labels on.



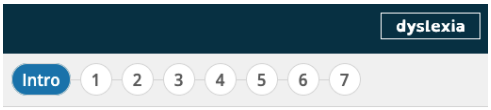
Show labels off.

- **Collapsible Questions**



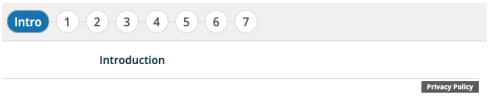
Shows a handle between a stimulus and the questions. When clicked, the questions will be collapsed to give more room for the stimulus. Use this option when working with stimuli that require much space.

- **Dyslexic Font Option**



Shows a button in the navigation of the test. Clicking it will replace the default font with **OpenDyslexic**, a font with optimized readability for dyslexic people.

- **Privacy Policy Button**

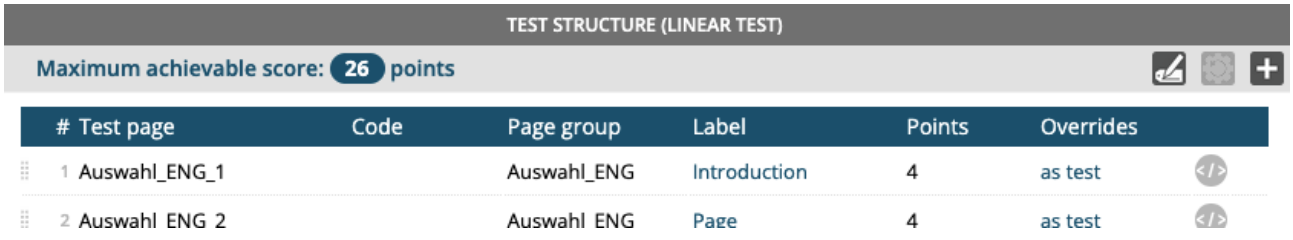


This option will add a button to the test pages which opens the privacy policy in a popup.
Click the **Edit Privacy Policy** button in the top menu to edit the popup's content.

Meta-Tags

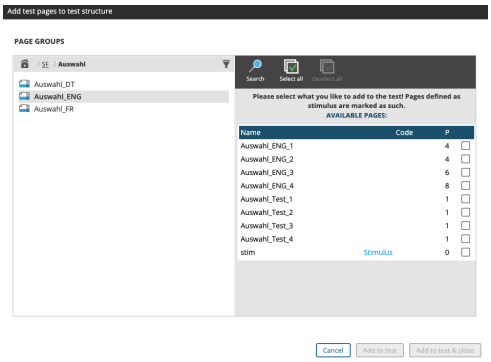
Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'level' : 'difficult'. By clicking the plus-sign you can create as many meta tags as you need.

5.2.3 Linear Test Structure (Adding Pages)



Test structure

- **Maximum Achievable Score**
  Maximum points of the test, both automatically and manually scored.
- **Edit Labels Button**
  Opens the label editor. See Linear Test Menu.
- **Reset Overrides Button**
  Resets all overrides. Overrides are skin properties changed on page level. They can be edited in the page list
- **Add Test Pages Button**



Opens the dialogue for adding test pages.
In the left column, you can navigate folders and page groups.
On page group level, a list of all pages of the group is shown in the right column.

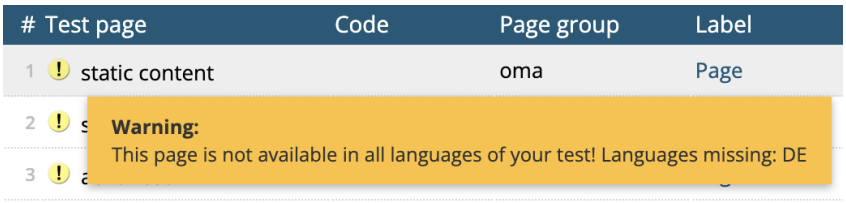
- **Search**
  Opens the search dialogue. The search is performed on all folders and page groups available for you. A double click on a result opens it in the add pages dialogue.
- **Select All**
  Selects all pages displayed in the right column.
- **Deselect All**
  Deselects all pages currently selected in the right column.
- **Cancel**
  Closes the dialogue.
- **Add To Test**
  Adds all currently selected pages to the test. The dialogue remains open.
- **Add To Test & Close**
  Adds all currently selected pages to the test and then closes the dialogue.

- **Test Pages Table**
  Shows the pages currently added to the test.
  You can reorder them by simply holding one with the mouse and drag it up or down. On hover, a red cross button is displayed on the very right. Click it to delete a page from the test.

  - **Column Test Page**
    The name of the test page.
  - **Column Code**
    The code of the test page. Blank if the page has no code.
  - **Column Page Group**
    The name of the page group the page belongs to.
  - **Column Label**
    The label currently assigned to the test page. Click it to assign a different label. A dialogue opens where you can choose from the currently available labels.
  - **Column Points**
    The total points from all scoreable interactions on the page.
  - **Column Overrides**
    An override changes skin settings of the test on the level of a single page. The default is **as test**. Click on it to open the override editor. The available settings correspond to the skin settings.
  - **Column Scripting**
    Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting.
    Click on the symbol to open the scripting editor. There are three types of scripts available.
    * **PRE** is executed when the page loads.
    * **POST** is executed when the page unloads.
    * **On Activity** is executed when the test taker uses an interaction on the page.

Quick Check Warnings

If a yellow exclamation mark is displayed in the first column of the page list, OASYS has detected a problem with the corresponding test page.
Hover the mouse over the exclamation mark to display information about the problem.



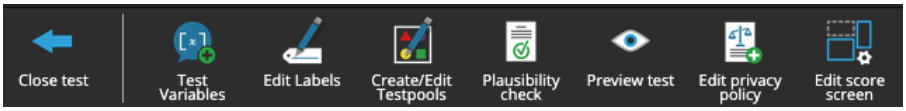
5.3 Fluid Tests

Fluid tests are composed of test blocks. Each test block refers to a test pool, which contains chosen test pages. The test block can use all or just some of the items or stimuli from the test pool, and these can be presented in a specified or random order.

Basic workflow for a fluid test:

- Create the test.
- Edit its properties.
- Add test pools.
- Add test pages to the test pools.
- Add fluid test blocks to the test, define a pool, the number of pages and order for them.
- Adding test takers is covered in the chapter Test Takers

5.3.1 Fluid Test Menu



Fluid test menu

The menu for a fluid test is identical to the one of a linear test, except for the button **Create/Edit Testpools**.
For all other menu items see section Linear Test Menu.

5.3.2 Fluid Test Properties

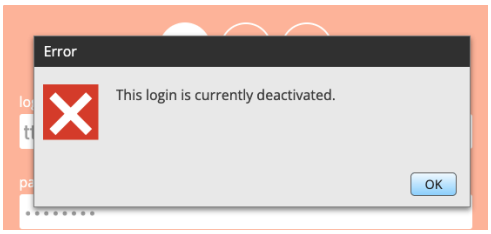
The properties section is located in the left column. The top two entries are for informational purposes.

Test-ID:
The test ID is needed for importing test takers from a CSV file. See chapter Test Takers

Data Recorded:
Information on recorded test results. For information on test results see chapter Test Results

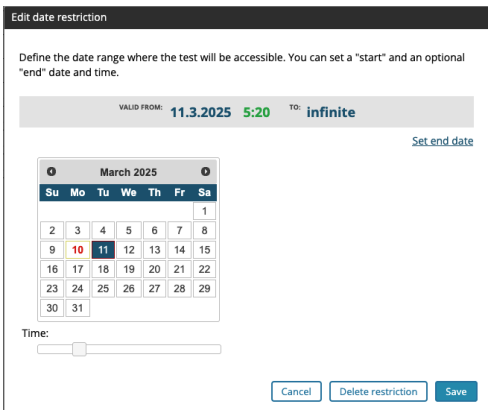
Validity
Validity controls whether and under which time restrictions test takers can log in to the test.

- **Test Active**



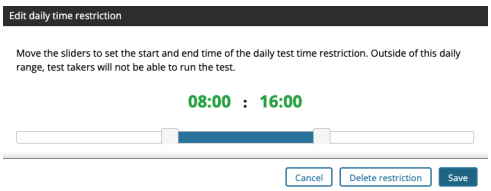
This option deactivates the test. A test taker trying to log in while the test is deactivated receives an error message.

- **Date Restriction**
  Using the date restriction, you can limit the time frame during which test takers can log in to the test.



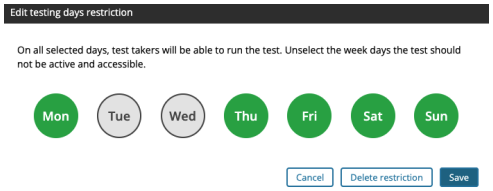
On a calendar, you can set a starting date for the test. Below, you can set a starting time for that day.
If you want to set an end date, click **Set end date** on the right. This will give you a second calendar for choosing an end date and time.
Login attempts outside the time frame will result in an appropriate message.

- **Daily Time Restriction**



Use the slider to set a daily timeframe when the test should be accessible.
If a date restriction is set, this option will work inside the date time frame!

- **Testing Days**

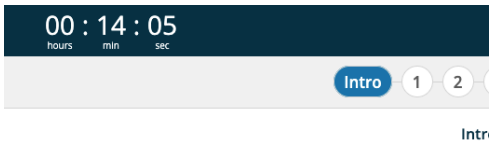


Select the weekdays on which the test should be accessible by clicking.
This works within set date and daily time restrictions!

- **Force Logoff on Inactive Test**
  When a test is deactivated, test takers which are logged in at that moment can complete the test by default.
  Activating this option will immediately log off all test takers when the test is deactivated. An appropriate message is displayed.

Timer

- **Use Timer**



This option limits the time a test taker can spend for the test.
The time is set in full minutes.
A timer is displayed above the navigation bar of the test.

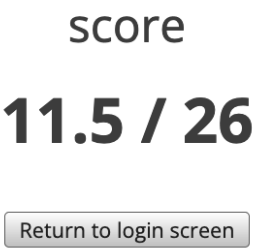
When a test taker logs off, the timer stops. It restarts with the same time left, when the test taker logs in again.
After the time is spent, the test taker won't be able to log in with the same name and password.

Miscellaneous

- **Save Results**
  When save results is disabled, OASYS won't record any test taker's answers. This option can be used for testing purposes or for showcase tests.

- **Limit Navigation**
  When this option is enabled, the test takers can only proceed to the next page. (Provided that all mandatory interactions are answered.)
  The navigation is shown but only highlights the current page instead of being clickable. The previous button is hidden, only the next button is shown.

- **Show Score**



This option requires autoscored interactions!
After the test, a page displaying the score achieved will be shown. This page can be edited using the **'Edit Score Screen'** button."

- **Hide Timeout Message**
  Requires Use Timer to be enabled. When this option is enabled, the timeout message will be omitted and the test taker will be redirected to the login screen after the time for the test is over. If **Show Score** is enabled, the test taker will be redirected to the **results screen**.

- **Wait for media to load**
  If enabled, the test will start as soon as all media is cached (i.e. preloaded).
  Consider this option if your test contains large audio or video files or if the test taker's internet connection might be poor.

Languages

- At least one of the languages must be activated.
- The test pages used must be available in all the languages selected. **Run the plausibility check from the top menu.**
- If you need additional test languages, you can ask the administrator of your OASYS instance to add them in the **Localization** menu.

Skin

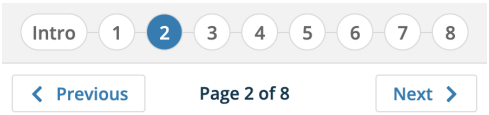
A skin is a visual theme or design that changes the appearance of the user interface without affecting its functionality. Skins can include custom colors, fonts, layouts, and graphics, allowing users to personalize the look and feel of the software.

- **Change Skin**
  OASYS provides two skins.
  - **Default Responsive**
    includes all navigation elements and additional options.
  - **Minimalistic**
    hides everything but the content of the test pages. It is designed for tests where test takers should not be distracted from the content by additional elements.
    Interactions for this skin must be set up to proceed to the next test page after an answer is given.

  Additional custom skins are possible but require programming knowledge, knowledge of the OASYS application and full access to the installation.
  Depending on the chosen skin additional options are available.
  The following options are available for the OASYS standard skin, default responsive.

- **Show Timer**
  If you are using a timer, it will be displayed in the top bar of the test by default. Uncheck this option to hide the timer.
  The timer will remain active!

- **Show Detailed Navigation**
  Disabling this option replaces the default navigation.
  In the top bar of the test, the line with page labels is hidden.

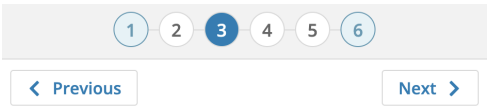


Detailed navigation on.

Detailed navigation off.

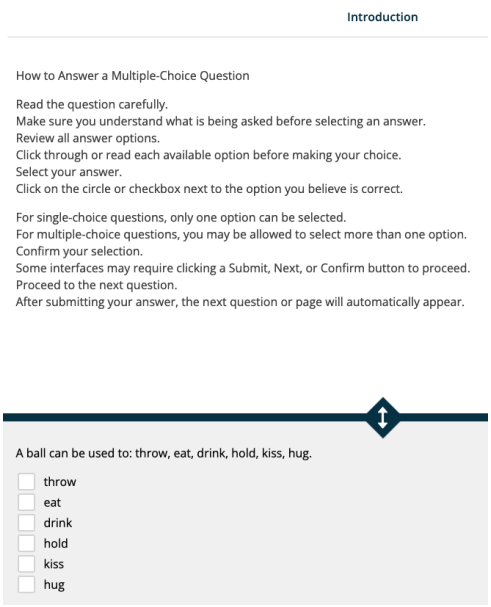
- **Show Simple Navigation**
  Disabling this option will **hide the previous and next buttons** in the navigation.
- **Show Page Labels**
  Disabling this option hides the information on the current page from the navigation.

Show labels on.



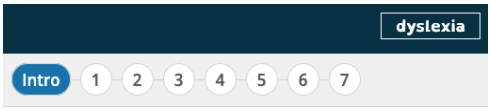
Show labels off.

- **Collapsible Questions**



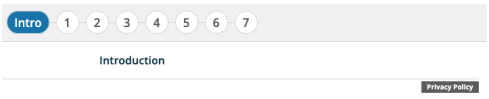
Shows a handle between a stimulus and the questions. When clicked, the questions will be collapsed to give more room for the stimulus. Use this option when working with stimuli that require much space.

- **Dyslexic Font Option**



Shows a button in the navigation of the test. Clicking it will replace the default font with **OpenDyslexic**, a font with optimized readability for dyslexic people.

- **Privacy Policy Button**



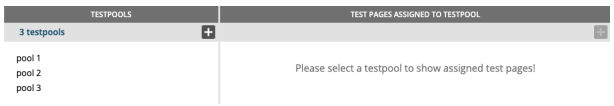
This option will add a button to the test pages which opens the privacy policy in a popup.
Click the **Edit Privacy Policy** button in the top menu to edit the popup's content.

Meta-Tags

Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'level' : 'difficult'. By clicking the plus-sign you can create as many meta tags as you need.

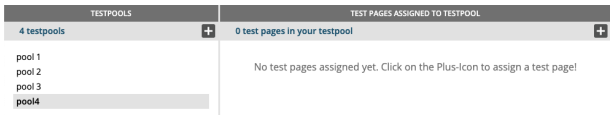
5.3.3 Create/Edit Testpools

- **Click Create/Edit Testpools in the top menu**



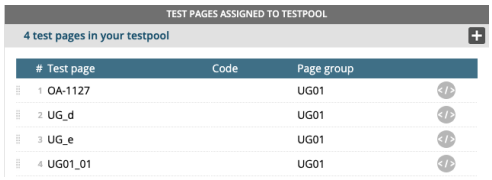
The pool editor opens.
In the left column, the existing pools are listed.
When a pool is selected, the pages in the pool are listed in the right column.

- **Click the plus sign on top of the testpools column**
  You will be prompted for the name of the new pool. Name it and confirm.
- **Select the pool you want to add pages to**



Click the plus sign on top of the test pages column.
The add test pages dialogue opens.
Follow the instructions for the **Add Test Pages Button** in the section Linear Test Structure (Adding Pages)

- **In the right column, the pages of the pool are listed**



In order to delete a page, hover it and click the red cross on the right.
You can reorder pages by dragging them up and down.
You can add scripts as described in the section Linear Test Structure (Adding Pages)

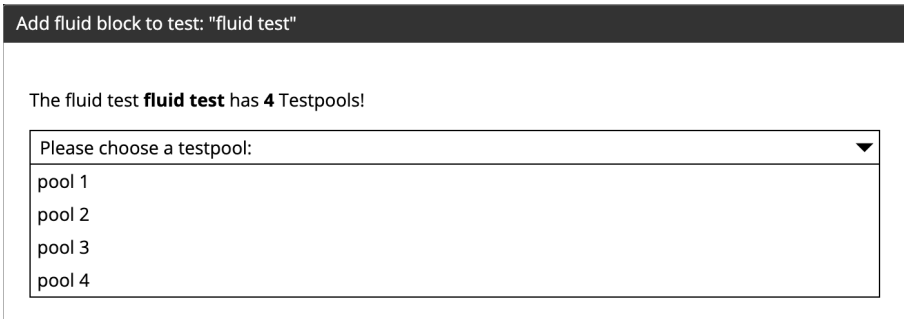
- **Close the pool editor to return to test editing mode.**

5.3.4 Add Testpools to the Test

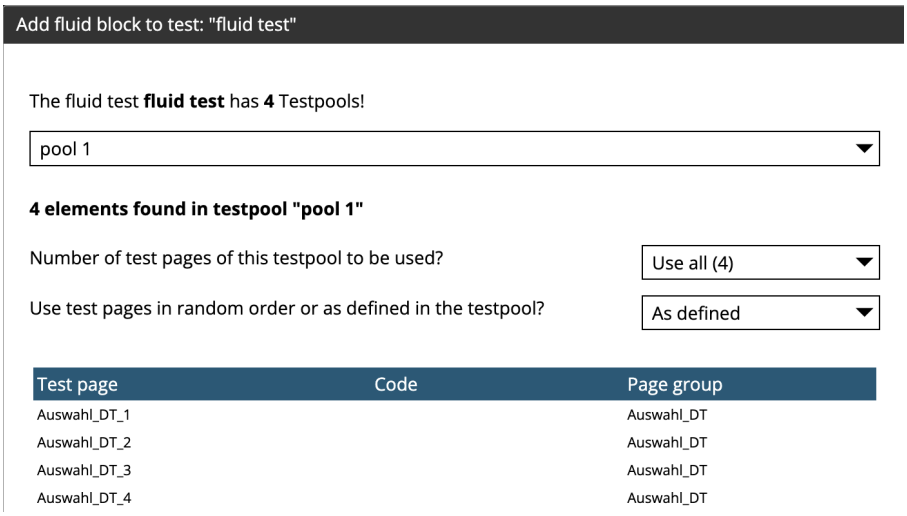
Initially, the test structure column (right column in test editing mode) is empty. The created testpools first have to be added.
On top of the list, there are four buttons.

- **Create/Edit Testpools**
  See explanation above.
- **Edit Labels**
  Opens the label editor. See Linear Test Menu.
- **Reset Overrides**
  See section Linear Test Structure (Adding Pages)
- **Add Fluid Test Blocks**
  Opens a dialogue for adding blocks to your test.

– **Choose the pool you want to add from the dropdown.**



– **A dialogue and information on the block is shown.**



– **Choose the number of pages you want to use from the dropdown.**
Be aware, that you are not choosing specific pages! It just means that the test taker gets this number of random pages from the pool when doing the test.

– **Choose the order in which the pages will be used in the test.**
As defined will show the pages in the same order you ordered them within the pool.
Random will show the pages in random order.

- **Column Testpool**
Name of the pool. If there are any problems, a warning icon is shown. Hover it or run the plausibility check.

- **Column Pages Used**
Number of pages from the pool that will be used in the test. Click to change.

- **Pages Total**
Total number of pages in the pool.

- **Order**
Order defined when adding the pool to the test. Random or as defined. Click to change.

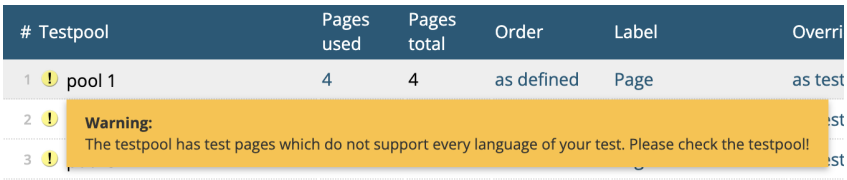
- **Label**
The label currently assigned to the pages of the pool. Click to choose.

- **Column Overrides**
An override changes skin settings of the test on the level of a single page. The default is **as test**. Click on it to open the override editor. The available settings correspond to the skin settings.

- **Column Scripting**
  Scripting is one of the more complex features of OASYS and is covered in the chapter Scripting. Click on the symbol to open the scripting editor. There are three types of scripts available.
  - **PRE** is executed when the page loads.
  - **POST** is executed when the page unloads.
  - **On Activity** is executed when the test taker uses an interaction on the page.
- **Column Position (Dice Symbol)**
  As a default, the pools run in random order within the test. (Green dice)
  Pools can be set to a fixed position within the test. Click the dice symbol. (Dice turns grey)
  Pools can be reordered within the test structure by dragging them up and down.

Quick check warnings

If a yellow exclamation mark is displayed in the first column of the pools list, OASYS has detected a problem with the corresponding testpool.
Hover the mouse over the exclamation mark to display information about the problem.



5.4 Mutation Tests

Mutation tests consist of multiple linear tests.
Each time a mutation test is started by a test taker or through a test taker template, one of the linear tests in the pool is executed.
The selection of the linear test can be either random or sequential, depending on the configuration.

A common example of a mutation test is the theoretical driving exam, which varies from attempt to attempt to ensure fairness, comprehensive assessment, and security.
Instead of using the same test repeatedly, a test is selected from a pool of tests.

Another reason for using mutation tests is to reduce the risk of cheating, as having different test versions makes it much harder to copy answers from neighboring test takers.

Basic workflow for a mutation test:

- Create the test.
- As a prerequisite, linear tests are needed.
- Edit its properties.
- Add linear tests.
- Adding test takers is covered in the chapter Test Takers

5.4.1 Mutation Test Menu

There are no menu items for a mutation test as it consists of linear tests. The setup has to be done on single test level.

5.4.2 Mutation Test Properties

The properties section is located in the left column. The top two entries are for informational purposes.

Test-ID:
The test ID is needed for importing test takers from a CSV file. See chapter Test Takers

Data Recorded:
Information on recorded test results. For information on test results see chapter Test Results

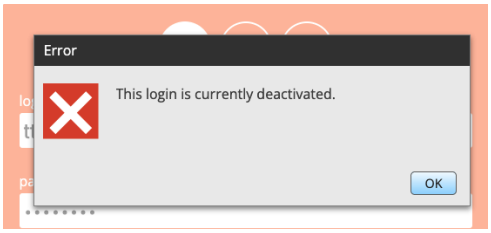
Pick Method:
According to the concept, that each time a test taker logs in, one linear test from the pool is picked, there are two methods of picking.

- **Random** picks a random test from the pool.
- **Sequential** uses the order of the tests structure in the right column. Each time, a test taker logs in, the next test in sequence will be picked. Use this to ensure that all tests will be picked equally.

Validity

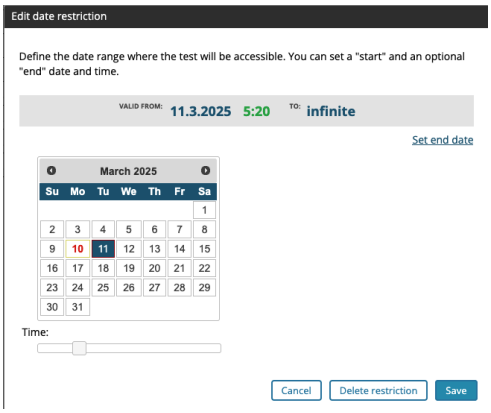
Validity controls whether and under which time restrictions test takers can log in to the test.
The validity settings set for the mutation test will override the validity settings of the individual tests!

- **Test Active**



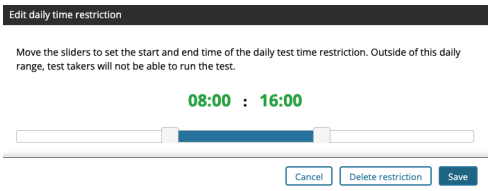
This option deactivates the test. A test taker trying to log in while the test is deactivated receives an error message.

- **Date Restriction**
  Using the date restriction, you can limit the time frame during which test takers can log in to the test.



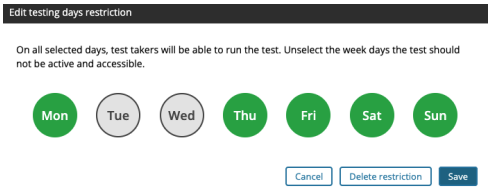
On a calendar, you can set a starting date for the test. Below, you can set a starting time for that day.
If you want to set an end date, click **Set end date** on the right. This will give you a second calendar for choosing an end date and time.
Login attempts outside the time frame will result in an appropriate message.

- **Daily Time Restriction**



Use the slider to set a daily timeframe when the test should be accessible.
If a date restriction is set, this option will work inside the date time frame!

- **Testing Days**

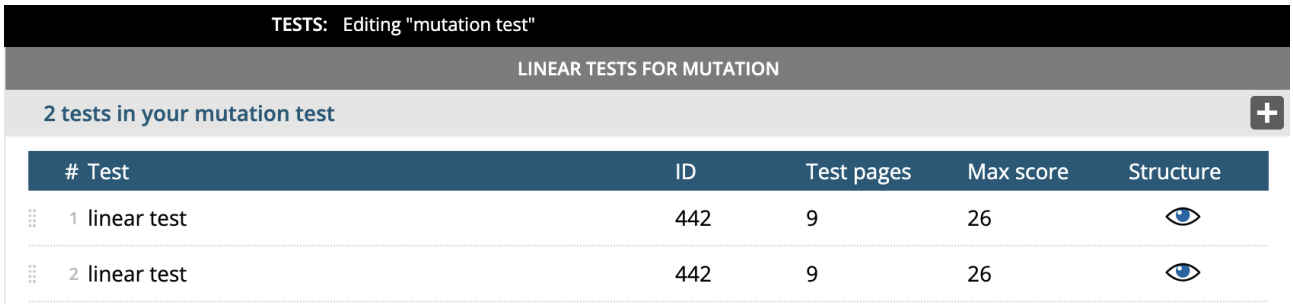


Select the weekdays on which the test should be accessible by clicking.
This works within set date and daily time restrictions!

- **Force Logoff on Inactive Test**
  When a test is deactivated, test takers which are logged in at that moment can complete the test

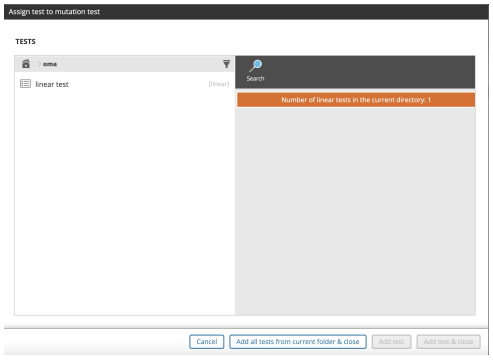
by default.
Activating this option will immediately log off all test takers when the test is deactivated. An appropriate message is displayed.

5.4.3 Mutation Test Structure (Adding Tests)

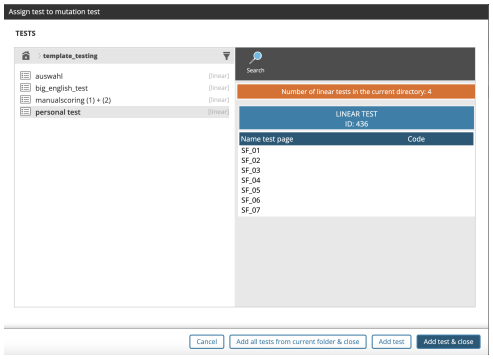


Mutation Test Structure

- **Add Tests Button (Plus Sign)**



Opens the dialogue for adding tests.
In the left column, you can navigate folders and tests.

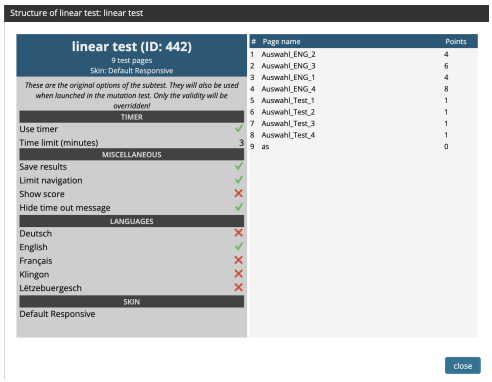


Select a test in the left column. Information on the test and its pages is shown in the right column.

- **Search**
  Opens the search dialogue. The search is performed on all folders and tests available for you. A double click on a result opens it in the add tests dialogue.
- **Cancel**
  Closes the dialogue.
- **Add all tests from current folder & close**
  Adds all tests from the left column to the mutation test and then closes the dialogue.
- **Add Test**
  Adds the selected test and leaves the dialogue open.
- **Add Test & Close**
  Adds the selected test and closes the dialogue.

- **Tests Table**
  Shows the tests currently added to the mutation test.
  You can reorder them by simply holding one with the mouse and drag it up or down. On hover, a red cross button is displayed on the very right. Click it to delete a page from the test.

  - **Column Tests**
    The names of the tests.
  - **Column ID**
    The IDs of the tests.
  - **Column Test Pages**
    Number of pages the test contains.
  - **Column Max Score**
    The maximum points reachable in the tests.
  - **Column Structure**
    Click the eye symbol.

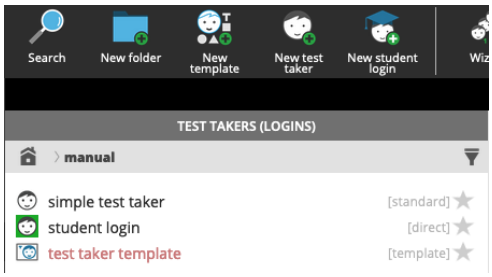


In the popup, all the test's properties which are relevant for the mutation test are shown.

Chapter 6

Test Takers

Test takers are independent objects in OASYS. They are created and stored separately from tests. Tests can be assigned to a test taker, usually through passwords. In the frontend, the test taker logs in with their name and the corresponding password and is then directed to the assigned test. Multiple passwords can be created for a test taker, each linked to a different test.



OASYS distinguishes between 3 different types of test takers: **simple or standard test takers, test taker templates and student logins.**
In the list view, they can be identified by **different icons**.

- **Standard Test Takers**
  do strictly follow the above description.
  The workflow is straight forward: Create a test taker, create one or more passwords in edit mode, assign one or more tests to a password.
  The test taker logs in to the frontend and is immediately directed to the test.

- **Templates**
  are reusable logins.
  The workflow is the same as for a standard test taker.
  The difference is, that the same name and password will be handed to all people who should do the test. Each time someone logs in with this username/password combination, OASYS will automatically create a cloned test taker to store the answers with.
  This type of test taker is ideal for **anonymous surveys**.

- **Student Logins**
  With a student login, unlike the standard test taker, the test taker does not go directly to a test by entering the password, but to an overview page called the dashboard.
  There, the student sees a list of all tests currently available to them. They can access a test by clicking on it in the dashboard.
  For a student login, tests are assigned to labels, not passwords.
  Student logins are suitable for managing, for example, a class. Once the students have been created, new tests can be assigned to them from time to time.

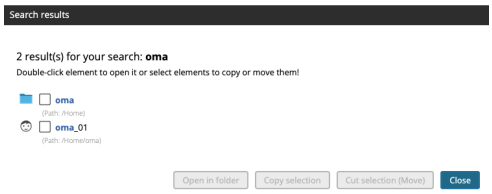
Important note!

Many of the options and menu entries apply to all three types of test takers. They are explained along with the **standard test taker**. Please refer to this section if something is missing in the other sections.

6.1 Test Taker Menu

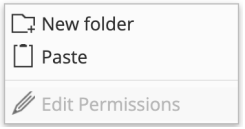
Test taker menu

- **Search**
  Searches the complete test taker manager for objects with a name containing the search string.



The search results open in a popup. You can select them by clicking the checkboxes.
Depending on your selection, you have various options.

  - **Open In Folder**
    brings you to the test taker manager with the selected object selected.
  - **Copy Selection**



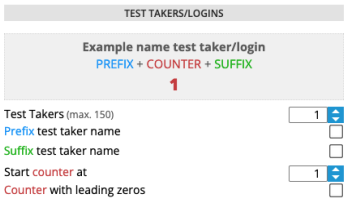
brings you to the test taker manager with the selected object in the clipboard.
Right click within the left column to raise the context menu and choose paste.

  - **Cut Selection (Move)**
    cuts the selection (i.e. removes it from its original place).
    Pasting the object to a new location works exactly as with copy selection.
  - **Close**
    closes the popup.

- **New Folder**
  opens a popup which prompts you for a name for the new folder. The folder will be created in the location which is currently displayed in the left column.
- **New Template**
  See section Test Taker Template
- **New Test Taker**
  See section Standard Test Taker
- **New Student Login**
  See section Student Login

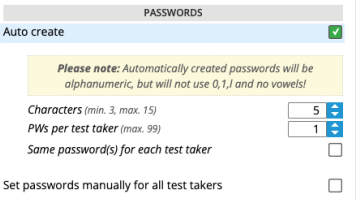
- **Wizard**
  The wizard is a tool for creating **standard test takers** in batches.
  Click the **Wizard button** in the test taker manager menu.

  – **Test Takers/Logins**

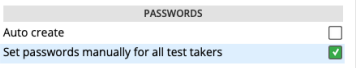


Test Takers: The number of test takers you want to create.
Prefix: Is the part of the name that will be added before the counter. For example, the prefix class5b will lead to class5b1 and so on.
Suffix: Is the part of the name that will be added after the counter. You can use prefix, suffix, both of them or none of them.
Start Counter At: The starting number for counting the test takers up.
Counter With Leading Zeros: Activating this option leads to a counter which gives you 001 instead of just 1. This is useful for ordering.

  – **Passwords**

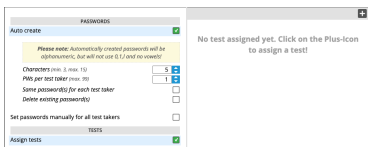


Auto Create generates passwords according to the rules set.
You can specify the **number of characters**.
More than one password can be created. (**One password per test you want to assign.**)
Same password(s) for each test taker assigns the same password to all while retaining the different test taker names.



Set passwords manually for all test takers will set the same password(s) for all test takers. This option requires creating passwords by clicking the plus-sign on top of the right column.

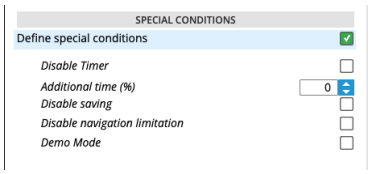
  – **Tests**



For auto created passwords you'll have to assign test(s) by clicking the plus-sign in the right column.
Important: In case you create more than one password, the same test will be applied to all passwords.

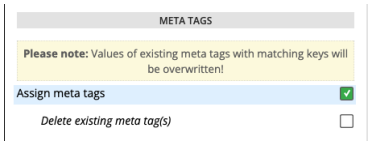
For manually created passwords you'll have to first create the passwords by clicking the plus-sign in the middle column.
The next step is selecting the password and click the plus-sign in the right column to assign a test to it.

– **Special Conditions**
Special conditions can override some settings of a test on the level of specific test takers.



Disable Timer: Infinite time for the test.
Additional Time: Extra time for the test.
Disable Saving: No results will be recorded.
Disable Navigation Limitation: Possible to freely go back and forth in the test pages.
Demo Mode: No results saved. Answers are deleted as soon as a page is left.

– **Meta Tags**



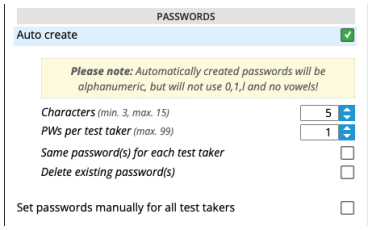
Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '5a'.
By clicking **the plus-sign in the very right column**, you can create as many meta tags as you need.
Delete existing meta tag(s) deletes **all** meta tags currently existing for the test taker(s).

Click the button Create Test Takers to create the test takers according to the options set.

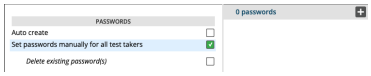
- **Apply To Selected**
Opens a dialogue to perform a set of actions on the current selection of test takers from the list (left column).
Multi-select by holding the shift or command key when clicking.
You can't mix student logins with other types of test takers as the set of available actions is different.

– **Standard Test Taker or Template**
For a better understanding, please see sections Standard Test Taker and Test Taker Template.

Passwords

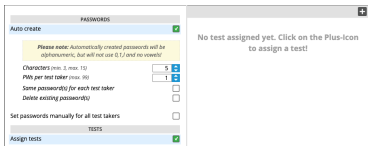


Auto Create generates passwords according to the rules set.
You can specify the **number of characters**.
More than one password can be created. (**One password per test you want to assign.**)
Same password(s) for each test taker assigns the same password to all while retaining the different test taker names.
Delete existing passwords deletes **all** passwords currently existing for the test taker(s).



Set passwords manually for all test takers will set the same password(s) for all selected test takers.
This option requires creating passwords by clicking the plus-sign on top of the right column.
Delete existing passwords deletes **all** passwords currently existing for the test taker(s).

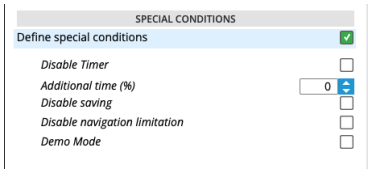
Tests



For auto created passwords you'll have to assign test(s) by clicking the plus-sign in the right column.
Important: In case you create more than one password, the same test will be applied to all passwords.

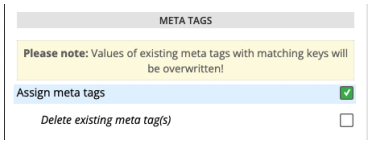
For manually created passwords you'll have to first create the passwords by clicking the plus-sign in the middle column.
The next step is selecting the password and click the plus-sign in the right column to assign a test to it.

Special Conditions



Special conditions can override some settings of a test on the level of specific test takers.
Disable Timer: Infinite time for the test.
Additional Time: Extra time for the test.
Disable Saving: No results will be recorded.
Disable Navigation Limitation: Possible to freely go back and forth in the test pages.
Demo Mode: No login and no results saved.

Meta Tags

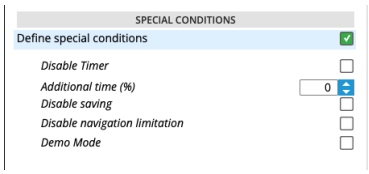


Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '5a'.
By clicking **the plus-sign in the very right column**, you can create as many meta tags as you need.
Delete existing meta teag(s) deletes **all** meta tags currently existing for the test taker(s).

– **Student Login**
For a better understanding, please see section Student Login

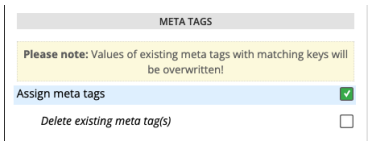
Special Conditions

Special conditions can override some settings of a test on the level of specific test takers.



Disable Timer: Infinite time for the test.
Additional Time: Extra time for the test.
Disable Saving: No results will be recorded.
Disable Navigation Limitation: Possible to freely go back and forth in the test pages.
Demo Mode: No results saved. Answers are deleted as soon as a page is left.

Meta Tags



Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '5a'.
By clicking **the plus-sign in the very right column**, you can create as many meta tags as you need.
Delete existing meta teag(s) deletes **all** meta tags currently existing for the test taker(s).

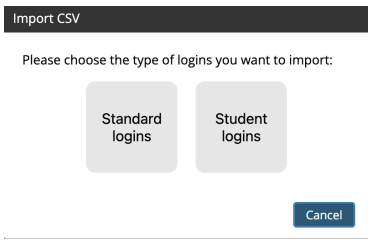
Column Labels

A label is the student login's equivalent to the standard test takers password. The workflow is, to create a label and then assign tests to it.
Create a label by clicking the plus-sign on top of the labels column.
Select the label.
Assign test(s) by clicking the plus-sign on top of the assigned tests column.
Hover a label to rename it, delete it or set an extra password for the test(s) attached.

Column Assigned Tests

Hover a test to get the delete button.

- **Import From CSV**
OASYS offers the ability to import test takers from CSV lists. Tests and passwords can also be assigned during the import process.
This method is suitable when larger groups of test takers need to be created based on existing lists, such as class lists.



As the structure for standard test takers and student logins is different, you'll have to choose first.

After confirming your choice, the import screen will open.
Use the example file you can download in the bottom right corner of the screen as a starting point!

Standard Logins

By default, imported test takers will be **created in the current folder**. You can specify a subfolder to be created in the CSV.

Select a File

Opens a file browsing dialogue. Navigate to your file and confirm.

Preview

A preview of the data to be imported is shown. Check if all columns are interpreted properly.

Abort wizard returns to the test taker manager.
Import from file imports the data.
Reset returns to the upload dialogue.

CSV Columns

- **Testtaker**
  The name for the test taker to be created.
- **Password**
  The password the test will be assigned to.
- **Tag**
  Additional information you might want to store. This field is optional.
- **Test-ID**
  Specifies the test to be assigned. Go to the test manager and open the test. The Test-ID is on top of the properties column.
  Multiple tests have to be separated with a backslash (\).
- **Subfolder**
  If not specified, the test takers will be created in the current folder. If the folder doesn't exist, it will be created.
  Multiple (sub)subfolders have to be separated with a backslash (\).
- **Displayname**
  Will be shown in manual scoring and results along with the test taker (login) name.
- **Metakey and Metavalue**
  Pairs of meta information. Must be numbered. Meta information is optional.

Student Logins

By default, imported test takers will be **created in the current folder**. You can specify a subfolder to be created in the CSV.

Select a File

Opens a file browsing dialogue. Navigate to your file and confirm.

Preview

A preview of the data to be imported is shown. Check if all columns are interpreted properly.

Abort wizard returns to the test taker manager.
Import from file imports the data.
Reset returns to the upload dialogue.

CSV Columns

- **Testtaker**
  The name for the test taker to be created.
- **Authentication**
  The type of authentication used for the login.
  direct: The password is stored in OASYS.
  SAML: SAML (Security Assertion Markup Language) is a standard for securely exchanging authentication and authorization data between parties, typically between an identity provider (IdP) and a service provider (SP).
  LDAP: LDAP (Lightweight Directory Access Protocol) is a protocol used to access and manage directory services, such as user and group information, over a network. It's commonly used for authentication and storing organizational data.
  If you are not sure which type to use, please ask your administrator.
- **Password**
  The password the student uses to log in to his dashboard. Leave blank for SAML and LDAP.
- **Tag**
  Additional information you might want to store. This field is optional.
- **Test-ID**
  Specifies the test to be assigned. Go to the test manager and open the test. The Test-ID is on top of the properties column.
  Multiple tests have to be separated with a backslash (\).
- **Subfolder**
  If not specified, the test takers will be created in the current folder. If the folder doesn't exist, it will be created.
  Multiple (sub)subfolders have to be separated with a backslash (\).
- **Displayname**
  Will be shown in the student's dashboard, manual scoring and results along with the test taker (login) name.
- **Metakey and Metavalue**
  Pairs of meta information. Must be numbered. Meta information is optional.

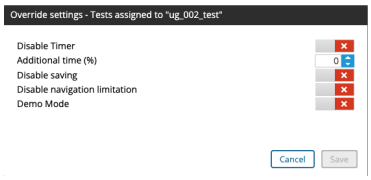
- **Rename**
  Change the test taker's or student's name.
- **Edit**
  Opens the test taker or student in edit mode.
- **Duplicate**
  Duplicates the selected test taker or student to the current folder with the suffix copy followed by a number. Works only with single selections.
- **Delete**
  Deletes the selected test taker or student
  All recorded data will be deleted!
- **Reset Results**
  Deletes all the test taker's or student's recorded test results.
- **Plausibility Check**
  Performs a check for common issues with the selected test takers or students. Will display a popup with either a warning or a success message.
- **Export List**
  Export a list of all selected test takers, including those in selected folders, to a CSV file.
  The columns of the list are **Test Taker** (login name), **Display Name**, **Login-Type** and **subfolder**.

6.2 Standard Test Taker

6.2.1 Standard Test Taker Menu

Standard test taker menu

- **Close Test Taker**
  Returns to the test taker manager.
- **Special Conditions**
  Special conditions can override some settings of a test on the level of specific test takers.



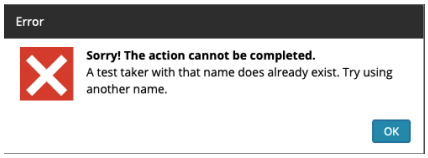
Disable Timer: Infinite time for the test.
Additional Time: Extra time for the test.
Disable Saving: No results will be recorded.
Disable Navigation Limitation: Possible to freely go back and forth in the test pages.
Demo Mode: No results saved. Answers are deleted as soon as a page is left.

- **Reset Test Taker Results**
  Deletes all the test taker's recorded test results.
- **Change Login Type**
  Opens a dialogue where you can change the type of the login. For the student login types see section Student Login.
- **Plausibility Check**
  Performs a check for common issues with the test taker. Will display a popup with either a warning or a success message.

6.2.2 Workflow

While in the Test Takers Manager, click on **New test taker** in the Top Menu. Enter a name when prompted. You'll go to edit mode automatically.

That name does already exist



If you enter a name which already exists, you'll get an error message. Test Taker names are **unique** within an OASYS installation.

Entering edit mode

If you want to edit an existing test taker, select an entry from the list view. Then click anywhere in the middle column.

The left column of the edit mode contains three entries.

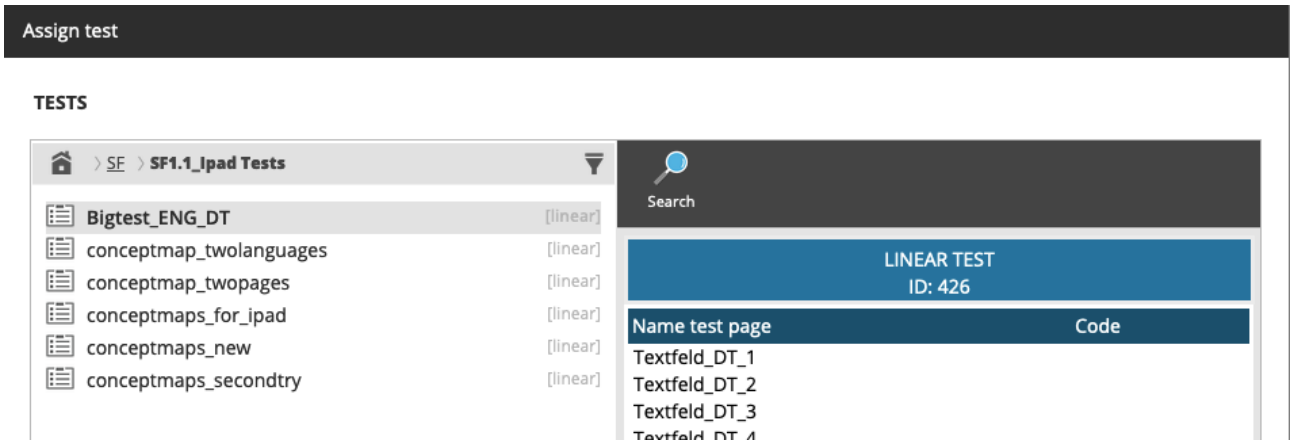
- **LOGIN SETTINGS**
  Display of the login type
  Possibility to set a **display name**. The display name is optional. Will be shown in manual scoring and results along with the test taker (login) name.

- **META TAGS**
  Meta tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '9a'. By clicking the plus-sign you can create as many meta tags as you need.

- **PASSWORDS**
  Passwords are needed to assign tests to the Test Taker. The test Taker's name and one of his passwords is what he enters at the frontend login in order to do a test.
  You can click the **random password** button to get a random 6 characters password.
  Or you can click the **plus-sign** button to manually set a password.
  If you set the password manually, you will be prompted to set an optional password tag. This can be useful in case test results from different tests are processed in a statistics software.

Assigning tests

Select a password in the PASSWORDS column. In the TESTS ASSIGNED column **click the plus-sign**.



In the left column of the dialog you can navigate all tests which are accessible for you. Click the test you want to add.
The left column shows you the pages in the selected test.

Options of assigning

Keep in mind that you can assign multiple tests to one password!
Apply to selected & close applies the selected test to the selected password and closes the dialog.
Apply to selected applies the selected test to the selected password and keeps the dialog open so you can assign further tests.
Add to all & close applies the selected test to **all password**s of the Test Taker and closes the dialog.
Add to all does the same but keeps the dialog open.

Assigned tests list

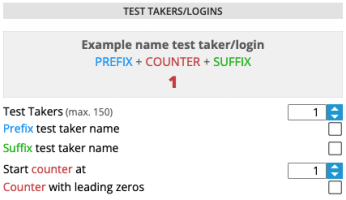
select a password in the left column. In the right column the assigned tests are shown.

- **Buttons**
  
  Copy login link to clipboard copies a link to the OASYS frontend, including login name and password. When a test taker uses this link, she will be directly logged in to the test without getting the login screen first.
  Reset all tests for selected password will delete all the test taker's recorded results for the tests assigned to the password.
  Assign tests opens the dialogue to assign tests.
- **Ordering**
  The order of the tests can be changed by dragging them up and down.
- **Delete a Test**
  Delete a test from the list by hovering it and click the red delete button.
- **Column Tests**
  The name of the test.
- **Column Test-ID**
  The ID of the test.
- **Column Results**
  Contains either the information that no data has been recorded yet or a **Reset** link. Click it to delete the test taker's recorded results for this specific test.

6.2.3 Wizard

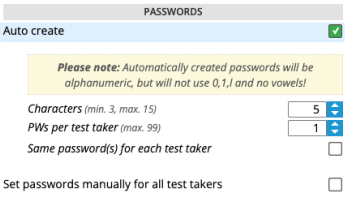
The wizard is a tool for creating **standard test takers** in batches.
Click the **Wizard button** in the test taker manager menu.

- **Test Takers/Logins**

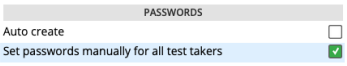


Test Takers: The number of test takers you want to create.
Prefix: Is the part of the name that will be added before the counter. For example, the prefix class5b will lead to class5b1 and so on.
Suffix: Is the part of the name that will be added after the counter. You can use prefix, suffix, both of them or none of them.
Start Counter At: The starting number for counting the test takers up.
Counter With Leading Zeros: Activating this option leads to a counter which gives you 001 instead of just 1. This is useful for ordering.

- **Passwords**

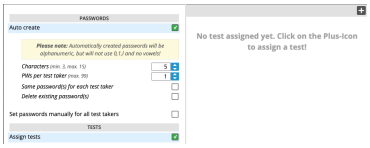


Auto Create generates passwords according to the rules set.
You can specify the **number of characters**.
More than one password can be created. (**One password per test you want to assign.**)
Same password(s) for each test taker assigns the same password to all while retaining the different test taker names.



Set passwords manually for all test takers will set the same password(s) for all test takers. This option requires creating passwords by clicking the plus-sign on top of the right column.

- **Tests**



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Important: In case you create more than one password, the same test will be applied to all passwords.

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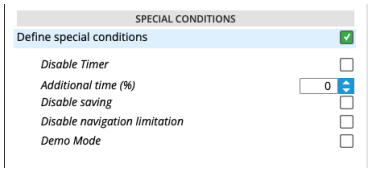
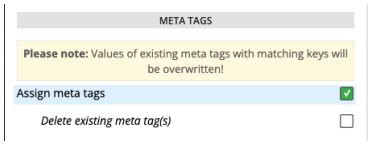
The next step is selecting the password and click the plus-sign in the right column to assign a test to it.

- **Special Conditions**
  Special conditions can override some settings of a test on the level of specific test takers.



Disable Timer: Infinite time for the test.
Additional Time: Extra time for the test.
Disable Saving: No results will be recorded.
Disable Navigation Limitation: Possible to freely go back and forth in the test pages.
Demo Mode: No results saved. Answers are deleted as soon as a page is left.

- **Meta Tags**



Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '5a'.
By clicking **the plus-sign in the very right column**, you can create as many meta tags as you need.
Delete existing meta tag(s) deletes **all** meta tags currently existing for the test taker(s).

Click the button Create Test Takers to create the test takers according to the options set.

6.3 Test Taker Template

Test Taker Templates are based on Standard Test Takers. The major difference is that you can use just one name/password combination for as many persons as you want.
Create a Test Taker Template and assign tests by following the instructions for the Standard Test Taker. See section Standard Test Taker.

Each time a person logs in to the frontend, OASYS automatically creates a new Test Taker in the backend.
The results of the test are individually stored with this newly created Test Taker.

Test Taker Templates are anonymous by nature. Please note that, even if the same person logs in twice with the same credentials, a separate Test Taker will be created. Test Taker Templates are mostly used for **anonymous surveys**.

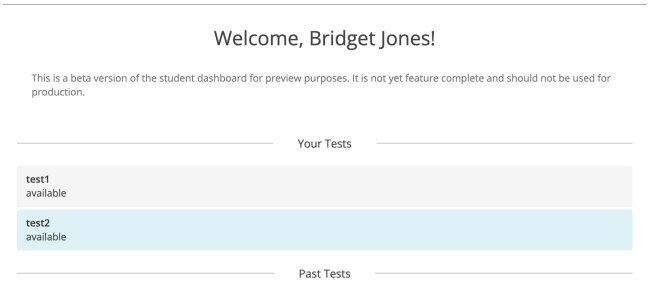
6.4 Student Login

With a student login, unlike the standard test taker, the test taker does not go directly to a test by entering the password, but rather to an overview page called the dashboard. There, the student sees a list of all tests currently available to them. They can access a test by clicking on it in the dashboard. Student logins are suitable for managing, for example, a class. Once the students have been created, new tests can be assigned to them from time to time.

Example use case:

- Create a folder for a class in the Test Taker Manager. In this folder, create student logins for each student.
- Create a test. If needed, you can control the availability of the test via Validity in the left column.
- In the Test Taker Manager, select all student logins for the class and click on Apply To Selected in the menu.
- Create a label and assign the test to it.

After that, the test will be available to all students in the class via their dashboard.

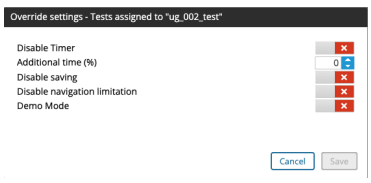


Student login dashboard

6.4.1 Student login menu

Student Login Menu

- **Close Test Taker**
  Returns to the test taker manager.
- **Special Conditions**
  Special conditions can override some settings of a test on the level of specific test takers.

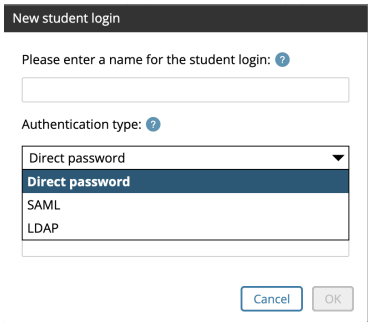


Disable Timer: Infinite time for the test.
Additional Time: Extra time for the test.
Disable Saving: No results will be recorded.
Disable Navigation Limitation: Possible to freely go back and forth in the test pages.
Demo Mode: No results saved. Answers are deleted as soon as a page is left.

- **Reset Test Taker Results**
  Deletes all the test taker's recorded test results.
- **Change Login Type**
  Opens a dialogue where you can change the type of the login. For the student login types see section Student Login.
- **Plausibility Check**
  Performs a check for common issues with the test taker. Will display a popup with either a warning or a success message.

6.4.2 Student Login Workflow

- **New Student Login**

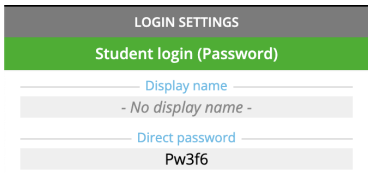


Click the button in the test taker manager's top menu.
You are prompted for a **unique name**, an **authentication type** and (for authentication with direct password) a **password**.

Authentication types:

- **Direct Password:** Username and password are **stored in OASYS**.
  This type shows an additional field **password:**.
  The password the student uses to log in to his dashboard. Not available for SAML and LDAP. When left blank, OASYS will generate a password.
- **SAML:** The authentication is done by an external service, **OASYS stores only the username**.
  SAML (Security Assertion Markup Language) is a standard for securely exchanging authentication and authorization data between parties, typically between an identity provider (IdP) and a service provider (SP).
- **LDAP:** The authentication is done by an external service, **OASYS stores only the username**.
  LDAP (Lightweight Directory Access Protocol) is a protocol used to access and manage directory services, such as user and group information, over a network. It's commonly used for authentication and storing organizational data.
  If you are not sure which type to use, please ask your administrator.

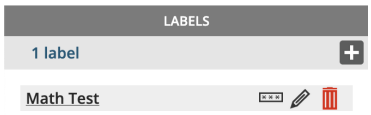
- **Login Settings**



Display Name: The name displayed on the dashboard and on the score screen.
Click to edit.
Password: The password to enter the dashboard.
Click to edit. **Not available for SAML and LDAP authentication!**

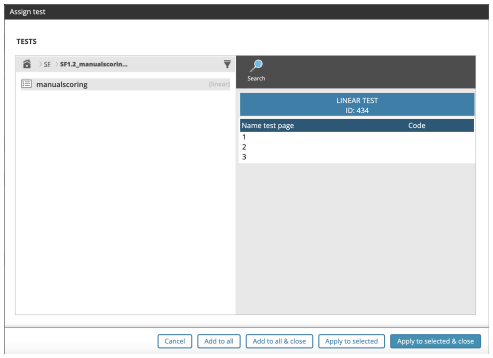
- **Meta-Tags**
  Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '5a'. By clicking the plus-sign you can create as many meta tags as you need.

- **Labels**
  For student logins, tests are assigned to labels. The label is shown in the dashboard, by clicking the label, the student can access the test.
  Hovering a label gives you three options:



  - **Set Password:** By default, no password is needed to access a test assigned to a label. If you set a password, the student has to know the password before he can do the test. This is, besides validity properties of the test, one more possibility of access control.
  - **Edit:** Change the name or tag.
  - **Delete:** Delete the label.

- **Assign Tests**
  Select a label in the left column. Then **click the plus-sign** on top of the right column. The add tests dialogue opens.



Select a test in the left column. Information on the test and its pages is shown in the right column.

  - **Search**
    Opens the search dialogue. The search is performed on all folders and tests available for you. A double click on a result opens it in the add tests dialogue.
  - **Cancel**
    Closes the dialogue.
  - **Add to all**
    Adds the selected test to all labels.
  - **Add to all & close**
    Adds the selected test to all labels and closes the dialogue.
  - **Apply to selected**
    Adds the selected test to the selected label.
  - **Apply to selected & close**
    Adds the selected test to the selected label and closes the dialogue.

- **Tests Assigned Table**
  Shows the tests currently added to the selected label.
  On top there are two buttons.
  Reset Results resets all results of the tests assigned to the label.
  Plus Sign opens the dialogue for assigning tests.
  You can reorder them by simply holding one with the mouse and drag it up or down.
  On hover, a red cross button is displayed on the very right. Click it to delete a test from the label.

  - **Column Tests**
    The names of the tests.
  - **Column Test-ID**
    The IDs of the tests.
  - **Column Results**
    Shows **no data yet** as long as the test taker hasn't answered questions of the test.
    Shows a **reset results** option when there is recorded data. Click it to delete the results of this test.

Chapter 7

Activity Tracker

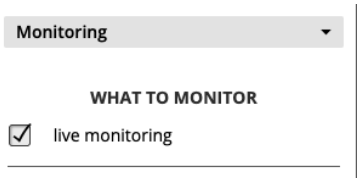
In the Activity Tracker, every access by test takers to tests is logged and can be reviewed.
There is a live monitoring feature that displays all current logins and their test progress.
By specifying a date, all logins on a particular day can be displayed.
This allows issues during the execution of a test to be identified and traced, or the login and progress of a test taker to be monitored. A complete log provides a detailed record of behavior during the test.

Activity tracker

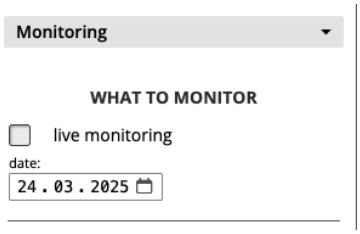
7.1 Monitoring Settings

The monitoring settings are located in the left column.

- **What To Monitor**



The default setting is **live monitoring**.
This will show the logins for the current day.

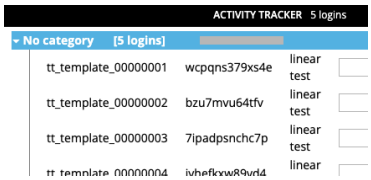


Unchecking live monitoring gives you a date picker.
This will show the **logins for the day selected**.

- **What To Show**

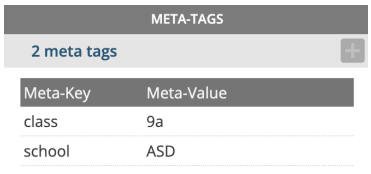
  - **Hide Completed Tests**
    Hides completed and aborted tests.
    A test is considered **complete** when a **Finish Test** button is clicked or when the **timer is up**.
    A test is detected as **aborted** after a certain time of no action from the test taker.
  - **Hide Lost Connections**
    Hides lost connections.
    A lost connection can occur if the test taker loses his internet connection. In general, a lost connection is detected when no data is received from the test taker for a certain period of time. This also happens if the test taker closes the browser window. **More detailed information can be found in the log** (see below).
  - **Expand All / Collapse All**
    The activity list in the middle column shows the logins by category. As long as no other categories are set, the category is named **No Category**.
    By default, the category is folded and you have to open it to see the logins. Expanding and collapsing opens or closes all categories.

Collapsed view

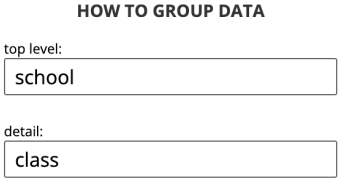


Expanded view

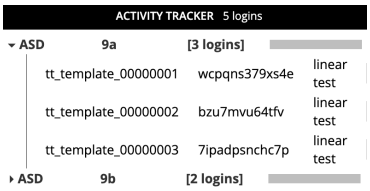
- **How To Group Data**
  Grouping is based on **Meta-Tags** assigned to test takers.
  Meta-tags are key-value pairs which can be used to store any kind of structured additional information about a Test Taker. For example 'class' : '5a'.



Go to the **Test Taker Manager**, add meta-tags to test takers.



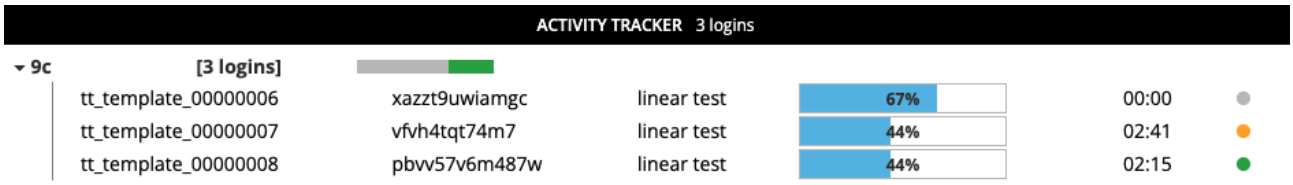
In the **Activity Tracker**, use the tag names for grouping.



The activity list will be grouped by the tag values.

7.2 Activity Tracker Column

The middle column of the activity tracker shows a list of test takers logged in to tests, according to the current monitoring settings.



List of monitored tests

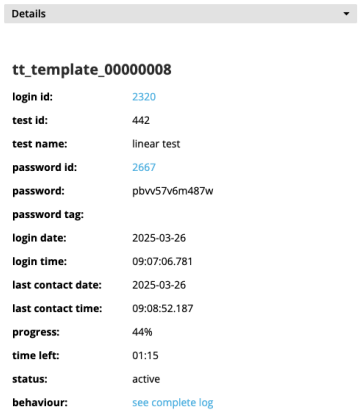
The line on top shows the total number of logins and indicates the ratio between completed and active tests.

Columns, from left to right:

- **Test Taker Name**
- **Password** used for the test(s).
- **Name of the Test**
- **Progress in Percent**
- **Time Left**
- **Status of the Test**
  - Grey: Finished (finish button clicked or time up)
  - Orange: Connection lost or aborted
  - Green: Active, receiving data

7.3 Details Column

The right column of the activity tracker shows details about a login.
Select a login in the activity tracker column.
The first line shows the test taker name.



- **Login ID:** Database ID of the test taker.
- **Test ID:** Database ID of the test.
- **Test Name:** Name of the test.
- **Password ID:** Database ID of the used password.
- **Password:** The used password.
- **Password Tag:** Tag of the used password, if set.
- **Login Date:** Day when the test taker logged in to the test.
- **Login Time:** Time when the test taker logged in to the test.
- **Last Contact Date:** Day when the last activity was sent to OASYS.
- **Progress:** Percentage of answers given.
- **Time Left:** If the test has a timer, the remaining time before the test finishes.
- **Status:** Test status. Active, finished or aborted.
- **Behavior:** Link to the detailed log of activities.

7.3.1 Complete Log

The complete log tracks every action the test taker takes.

Login: tt_template_00000007

Test: linear test

event	date	time (client)	time (server)	time left	item number	item id	language	type	details
1	2025-03-26	09:05:26	09:05:27	00:03:00	0	2930	EN	login	Mozilla/5.0 (Macintosh; Intel Mac OS X 10.15; rv:135.0) Gecko/20100101 Firefox/135.0 3840x2160
2		09:05:29	09:05:42	00:02:58				oasysChoice	**choice_1:** ["drink"]
3		09:05:31		00:02:56	3	2933		navigation	0 ➡ 3
4		09:05:33		00:02:54				oasysChoice	**choice_1:** ["juice"]
5		09:05:35		00:02:51	1	2931		navigation	3 ➡ 1
6		09:05:37		00:02:50				oasysChoice	**choice_1:** ["wounds"]
7		09:05:38		00:02:48	8	2909		navigation	1 ➡ 8
8		09:05:40		00:02:47				oasysChoice	**choice_1:** value_1
9		09:05:45	09:05:46	00:02:41				closeWindow	null

Log example, test aborted by closing the browser window.

Each line of the log stands for one event, i.e. test taker action. The server (OASYS) and client (browser) time is recorded with the event. For interactions, the given answer is logged.
The type **Close Window** indicates that the browser window has been closed.
The type **timeUp** occurs when the timer runs out.
A **lost connection** has a log which ends with an interaction or navigation instead of any closing or finishing event.

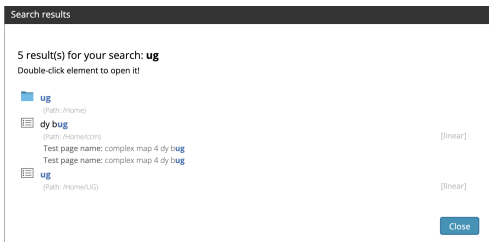
Chapter 8

Test Results

8.1 Test Results Menu

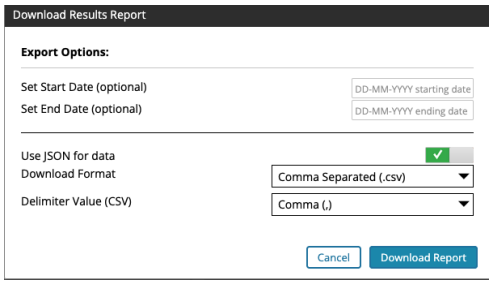
Test results menu

- **Search**
  Searches the complete test taker manager for objects with a name containing the search string.



The search results open in a popup. Double click a result.
The results manager will open with the result selected.

- **Download Answers**
  Exports a file with the detailed recorded answers for the test.



If no timeframe is set by **Start Date** and **End Date**, all existing results will be exported.

Use JSON for data makes a difference of how choices are exported.

page id	142	142	142
page name	choices	choices	choices
page code			
variable	choice_1	choice_1	choice_1
subvalue	banana	cucumber	apple
type	Choice	Choice	Choice
	1	0	1

Without JSON

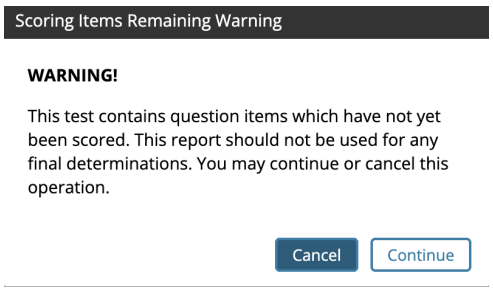
page id	142
page name	choices
page code	
variable	choice_1
type	Choice
	["banana","apple"]

JSON

Without JSON, each option generates one column. There will be a line indicating checked (1) or not checked (0).
JSON groups the checked options in one field.

Download format specifies the file format you want to export to. The right choice depends on the software you'll use for further data processing.
CSV (comma separated values) is the most common and can be processed in most spreadsheet calculation and statistics software.
For CSV, you have to **specify a delimiter** character.
MS-Excel (.xlsx) is suitable for Microsoft Office.
Open/Libre office (.ods) is optimized for Open or Libre office applications.

- **Download Score**
  Exports a file with the score(s) for each test taker.



Score download is available for **both manually and automatically scored tests**.
If a manually scored test isn't completely scored, you'll receive a warning.

Export Options:

- **Start Date and End Date:**
  If no timeframe is set, all existing results will be exported.
- **Level of Detail:**
  Score for each item creates a detailed report including scores by item.

	login	tag	metainfo	lastActivity	total				
page id						2930	2931	2932	2933
page name						Auswahl_ENG_1	Auswahl_ENG_2	Auswahl_ENG_3	Auswahl_ENG_4
page code									
variable						choice_1	choice_1	choice_1	choice_1
type						Choice	Choice	Choice	Choice
	tt1			2025-03-10 14:40:49.888	5.5	1	1	1.5	2
	tt_template_00000001		{"class":"9a","school":"ASD"}	2025-03-24 10:52:09.224	5.5	1	1	1.5	2
	tt_template_00000002		{"class":"9a","school":"ASD"}	2025-03-24 10:52:20.588	5.5	1	1	1.5	2

Score for each item

Total score only omits the display of single items and shows the sum of scores for all items in a single column.

	login	tag	metainfo	lastActivity	total
page id					
page name					
page code					
variable					
type					
	tt1			2025-03-10 14:40:49.888	5.5
	tt_template_00000001		{"class":"9a","school":"ASD"}	2025-03-24 10:52:09.224	5.5
	tt_template_00000002		{"class":"9a","school":"ASD"}	2025-03-24 10:52:20.588	5.5

Total score only

  - **Download format** specifies the file format you want to export to. The right choice depends on the software you'll use for further data processing.
    CSV (comma separated values) is the most common and can be processed in most spreadsheet calculation and statistics softwares.
    For CSV, you have to **specify a delimiter** character.
    MS-Excel (.xlsx) is suitable for Microsoft Office.
    Open/Libre office (.ods) is optimized for Open or Libre office applications.

- **Report Builder**
  See below.

8.1.1 Report Builder

In addition to the ability to download scoring results and raw response data, OASYS now has the ability to render survey and test results graphically in an assortment of plot types. Additionally, a variety of descriptive statistical data are now calculated, presented, and available for download.

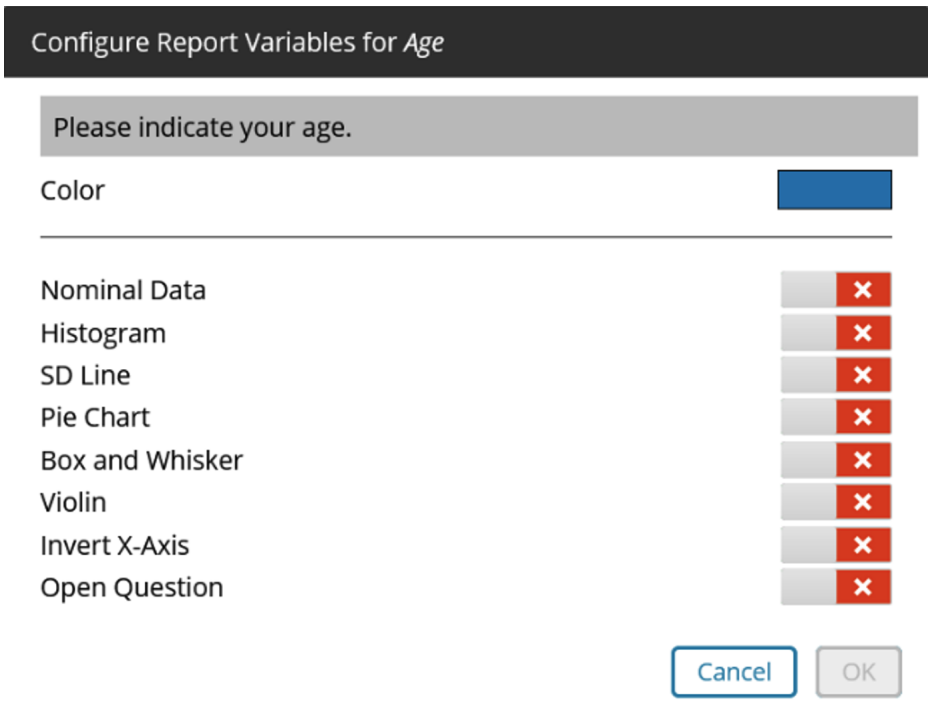
From the Test Results editor, the Report Builder-button will launch the chart reporting module which contains numerous options for graphical report building. From this initial interface, you will be presented with the two primary plot types: single and multi.

- **Single chart plotting:** Single plot types only use the data from a single survey or test question, and allow the data to be plotted in a variety of common types (histogram, violin plot, pie chart, box and whisker plot, and an optional standard deviation line as an overlay). Some of these chart types contain sub-options which are shown when selected. Additionally, "open question" items which do not contain chartable data can be included in the report.
- **Multi chart plotting:** Multiplot plot types have the ability to present data from multiple items for the purpose of direct comparison and analysis. This special plot building feature is primarily aimed at survey result items which use the same scale (i.e., a series of questions on a LIKERT scale). Any number of test/survey items are selectable for the group plot, and can be ordered in any possible combination. The 3 varieties of plots available in this mode are histogram (with standard deviation line), profile line, and horizontal bar chart.
- **Miscellaneous features:** Other options include downloading of the test/survey's descriptive statistics, customizable text blocks, page break insertion, repositioning report blocks, saving/loading of reports, and PDF output; these options are covered in detail further below.

8.1.1.1 Single chart plotting

Main plot type overview

The primary plot types available in single plotting mode are histogram, pie chart, violin chart, and box and whisker chart. All of these primary types can be overlaid on top of one another, except for the pie chart option. Once a single plot is added to the report layout, it can be updated and modified by clicking on its entry in the "REPORT CONFIGURATION" section on the left-hand panel from the main report builder view.



Single plot options screen

Nominal data override

It should be noted that the charting system will attempt to force numerical value to all item data. An example would be a survey question which states “I am happy with this course”, and the responses setup categorically as “strongly disagree”, “disagree”, “agree”, and “strongly agree”. Although these responses do not inherently contain numerical values, the charting logic will apply integer values 1 through 4 across the responses. In this way, categorically ordered responses can be numerically analyzed as if they were natively quantitative. This forced numerical application on the data can be disabled by clicking the “nominal mode” toggle option in the chart configuration dialog. With the “nominal mode” option is enabled, a number of other chart configuration options are disabled, since those would only apply to quantitative data.

Histogram plot

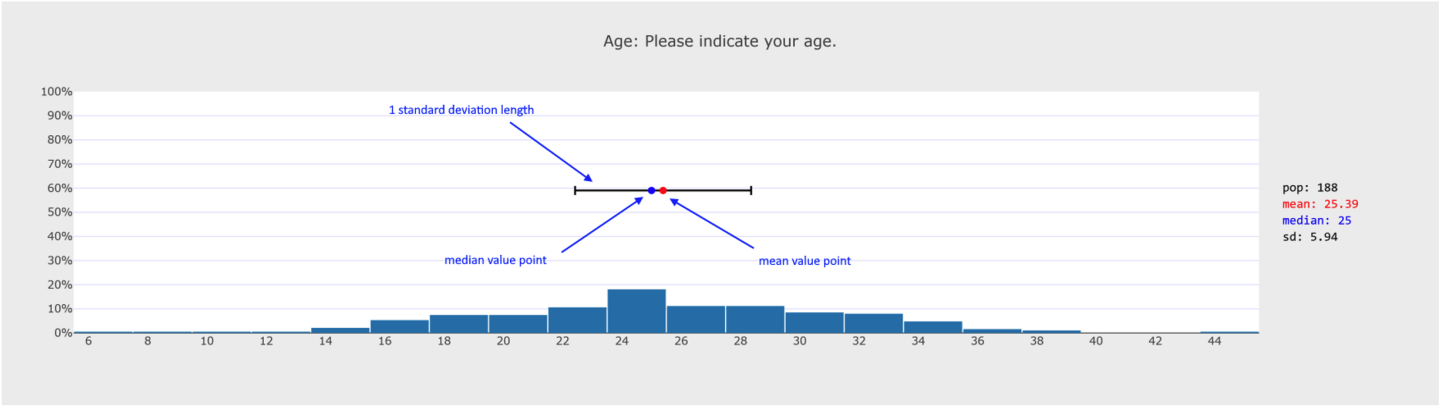
The histogram plot type displays response data with each bar representing a percentage of the total response values. Various configuration options are present, depending on the type of data being analyzed. Native quantitative response items contain the most configurability, whereas numerically assigned category data will contain fewer configurable options. The sub-options for the histogram plot type are as follows:

- **Point labels option:** This option will show the percentage value of each histogram bar, and when applicable, the bin range of each bar.
- **Show 0 on x-axis option:** Depending on the type and range of the data being plotted, the 0 on the X-Axis may not be automatically visible. This option ensures that 0 on the X-Axis is visible on the initial plot creation.
- **Override auto bin size option:** When charting questions with a high variation of responses, the charting system may automatically group ranges of responses together for readability. An example would be a demographics question with a large variation of responses ranging from 20 to 80. The automatic grouping may select a bin size (grouping range) of 5 or 10. This automatic bin size selection may be overridden with a value of the operator’s choice. This option is available to any natively quantitative dataset.

Histogram sub-options

SD line (standard deviation line)

The standard deviation line is most commonly used as an overlay on a histogram in order to visually demonstrate the range of 1 standard deviation, along with the calculated median and average values. It is, however, not mandatory to overlay on top of another chart. Available charts to combine this option with are histogram, violin, or box and whisker.



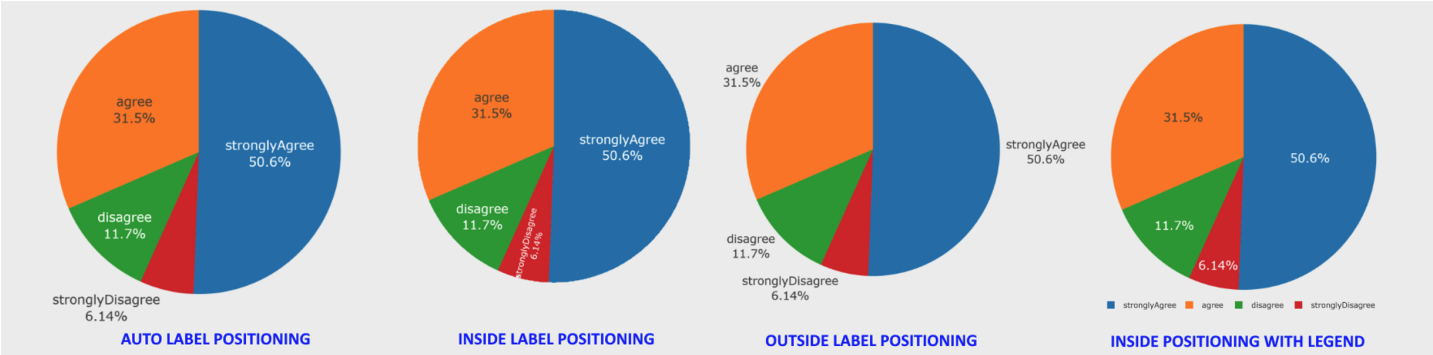
Standard deviation line

Pie chart

The pie chart will render all data as a percentage of a “pie” graph. The largest portion of responses start at the top-right of the chart, and continue counter-clockwise in descending order of percentage. Colors are auto-assigned and may not currently be modified.

- **Label layout:** This option allows the override of the label positioning for the response value and percentage labels. By default, the “auto” mode is selected, and inside/outside positioning is determined for each label automatically based on total number of elements, and visual “best fit”. The auto-selection may of course be overridden by selecting a specific option.

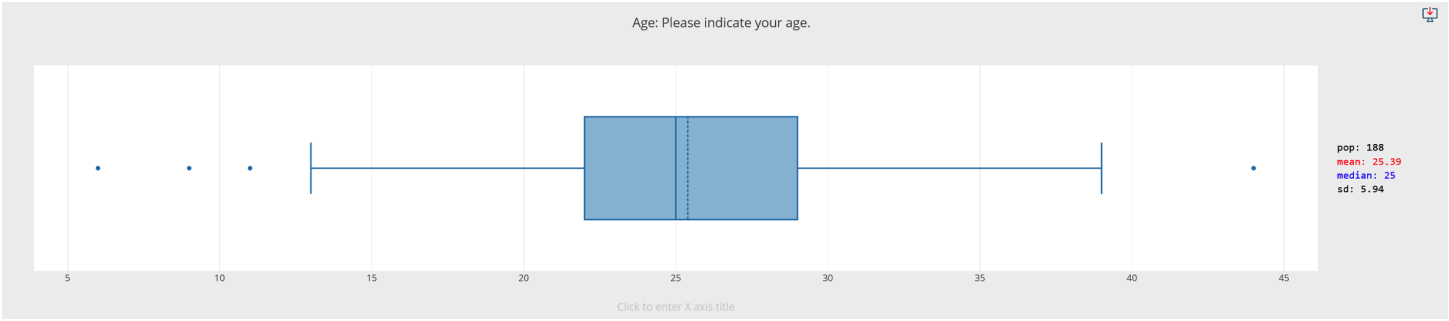
  The “Percent with Legend” option was specifically implemented for cases where in there is a large number of uniqueresponses recorded, and a pie chart is the desired plot type (although this type of chart is not recommended in these cases). This option moves the actual values into a color-coded legend, while leaving the percent values inside the pie chart. In this mode, specific response values may be removed from the pie chart by clicking on value in the legend area.



Pie chart positioning

Box and whisker plot

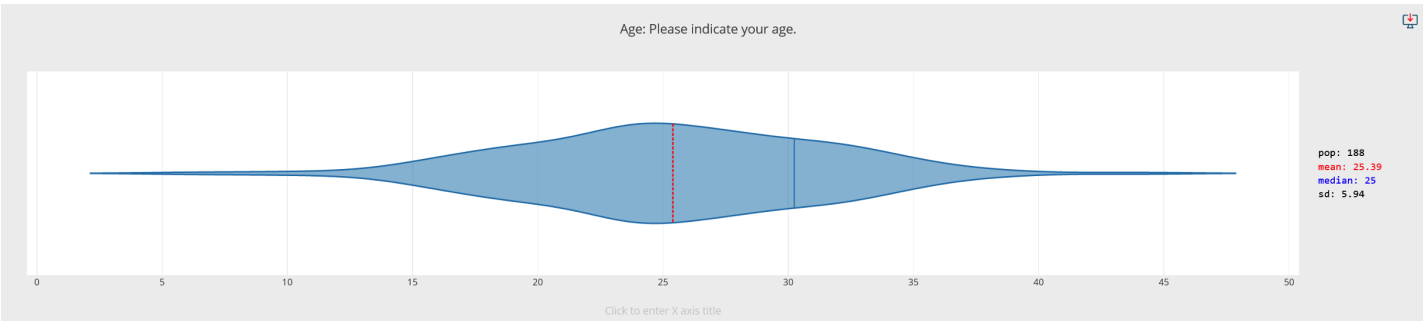
The box and whisker chart allows for a quick visual analysis of the main distribution points of data, along with suspected outliers. The only option contained with this plot type is the ability to hide outliers. The box and whisker plot is a standard formulation showing the upper hinge and whisker, lower hinge and whisker, mean, and median markers (dashed and solid horizontal lines, respectively.)



Box and whisker plot

Violin plot

The violin plot is used in visually analyzing the distribution frequency of data by way of density curves. The mean line is shown within the plot, and there are no configurable options for this plot type. This type of chart can be useful in comparing equally scaled survey data against each other to demonstrate the density distribution of responses.



Violin plot

Invert x-axis option

This option is primarily intended for “forced” or “converted” nominal data which have been assigned numerical values. In our example of a survey in section 4.2 “Nominal Data Override”, we have our nominal responses “strongly disagree” to “strongly agree” assigned values 1 through 4. There may be a scenario however where the survey was incorrectly designed to have “strongly agree” to “strongly disagree” being assigned values 1 through 4 which requires reversal of the ordered direction to match other the question items’ layouts. The enabling of the ?Reverse X-Axis? option for the errant question will flip the direction of the response values to correctly match the intended layout.

Open Question option

This option is specifically for “open question” or “open text” item responses which do not contain any statistically analyzable data. The responses are directly inserted into the report layout as a single block of text, and it does not contain any configurable options. The OASYS charting logic attempts to automatically detect which question items are open text, and when successful, prevents the selection of any other option. If the automated detection fails, the option is still available for the operator to manually select.

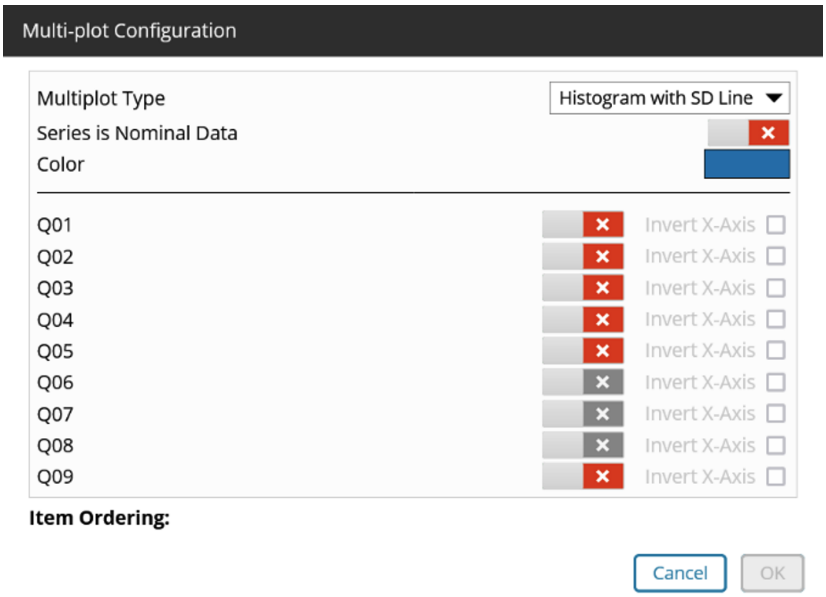
8.1.1.2 Multi chart plotting

The multiplot charting section allows for direct comparison of different series's data against each other. There are 3 chart types available: histogram, profile line, and horizontal bar (essentially, a histogram rotated 90 degrees). Only questions/results that contain identical scales should be compared against each other in this mode, otherwise the resultant plots will not be useful in any meaningful way. Survey questions with LIKERT type scales are the primary target of this submodule.

It is important to note that the ordering of the series is based on the order in which they are clicked. In this way, the series' data can be arranged in any desired position. The "item ordering" label at the bottom of the dialog will always show the order in which the data series were selected.

It should be noted that question types which do not contain analyzable data are automatically excluded from being selectable (e.g., "open question" type items).

Any multiplot chart generated by this submodule are grouped into one singular "report block" entry in the report configuration area on the left side of the main report builder screen. Once a multiplot is added to the report layout, it can be updated and modified by clicking on its entry in the "REPORT CONFIGURATION" section.



Multiplot options screen

Series is nominal data
As with the single plot option, this toggle option reverts the forced numerical value assignment to nominal data. Activating this option removes the histogram and profile line plot type selections, since those plot types specifically rely on numerical calculability, which this option removes. Only the horizontal bar option will remain when this option is active.

Histogram with SD line
The histogram with SD line is the initial default option for multiplot charting. Although the same chart output can be achieved by individually selecting question items through the single plot builder, this method offers a quick and efficient way to select and compare 2 or more series? data. Histograms are stacked one on top of the other in the order selected.

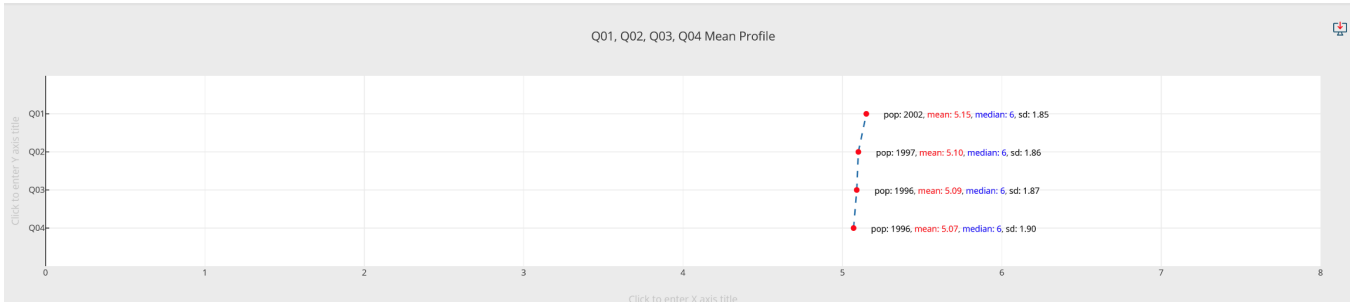
As is available in the single plot dialog, all selected series items have a “Invert X-Axis” option to correct any reversed axes that may require it.

Histogram with SD line

Profile line

The profile line plot is a special customized chart type which graphs the mean values of multiple series’ data. Each red dot on the graph is the mean value for the particular item, and a dashed line is drawn to the next mean value point for the proceeding item. This chart type is helpful in quickly analyzing the means of same-scale series data.

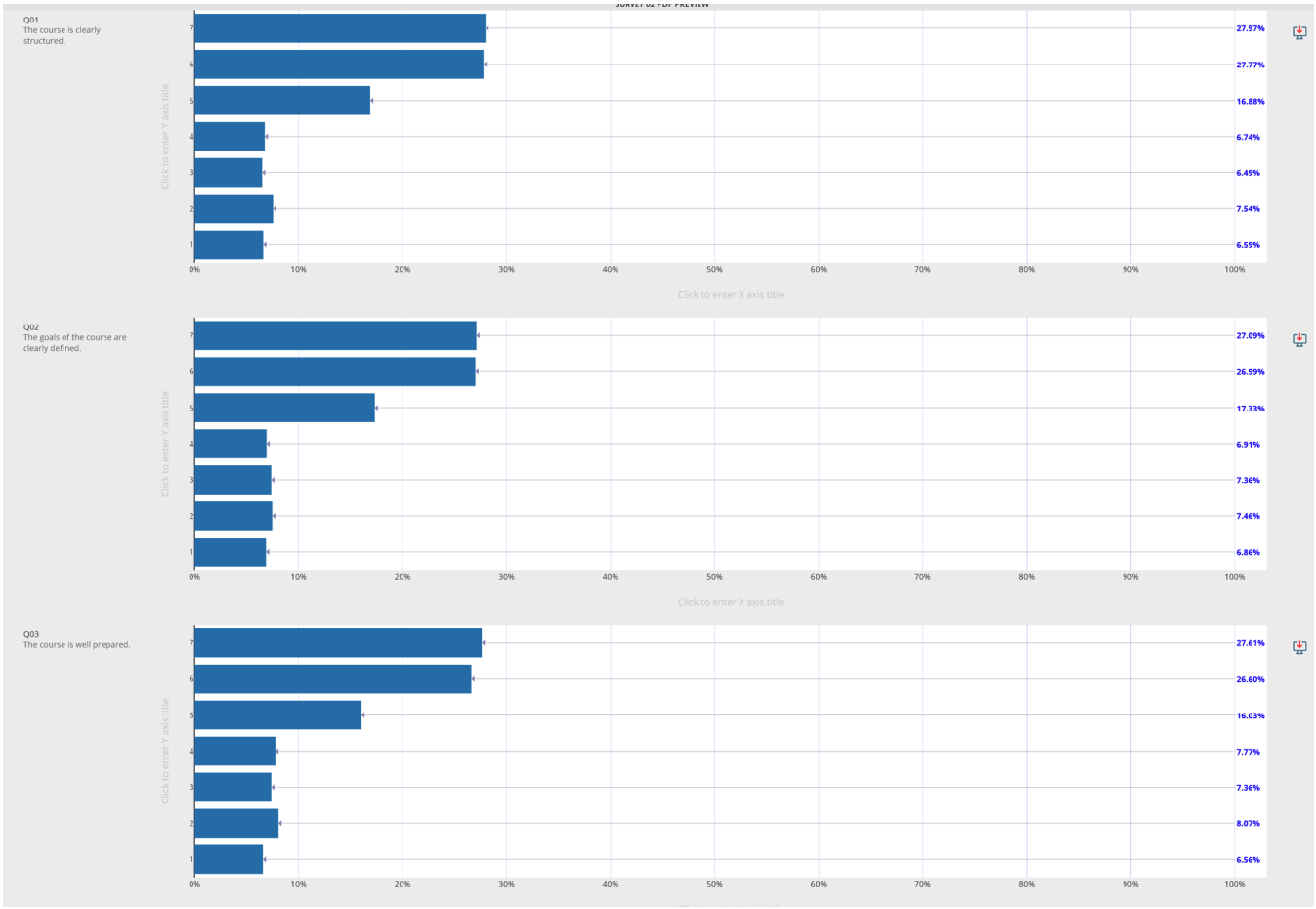
Each charted series will additionally contain the respective population, mean, median, and standard deviation values adjacent to the data points.



Profile line

Horizontal bar

This plot type is a simplified and rotated histogram view without any additional elements such as population, mean, etc. This mode will simply graph the selected series' data, and shows their respective distribution percentage values without any additional statistical information.



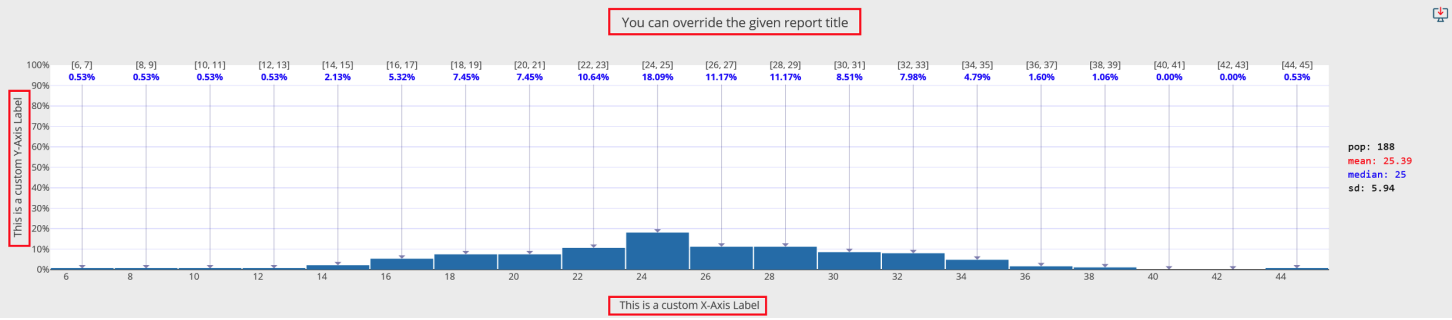
Horizontal bar

8.1.1.3 Report building

The ultimate goal for the report builder and charting module is to be able to generate quick out-of-the-box reports with predefined and commonly used plot types. There are a few ways to customize and finalize the layout of the final report layout by using various organizational, formatting, and text editing tools.

Title and label editing

For any chart which is created, there are some customizable labels which can be added or modified. The chart title itself may be manipulated regardless of the pre-filled source data text which is used by clicking on the title itself in the plot area. The same is true for the X-Axis and Y-Axis labels (which are never pre-filled).

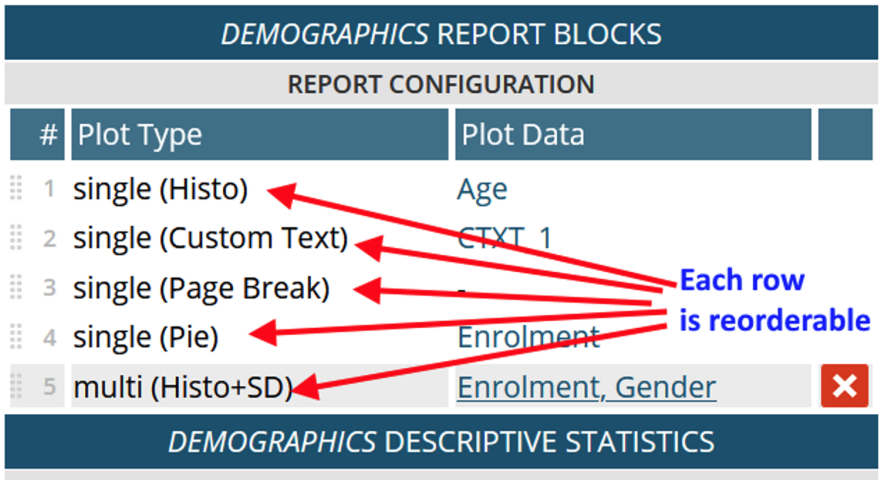


Custom axes labels and titles

Report block ordering

Individual charts (and other report elements) can be reordered in any desired state by dragging and dropping the various report block elements on the left-hand side of the main report builder screen ("REPORT CONFIGURATION"). There are a total possible of 4 types of "report blocks" which are all able to be repositioned in the report configuration area

- Single Plot
- Multiplot (charts within a multiplot are considered all one single "report block" element)
- Page break (for page separation between desired sections)
- Custom Text



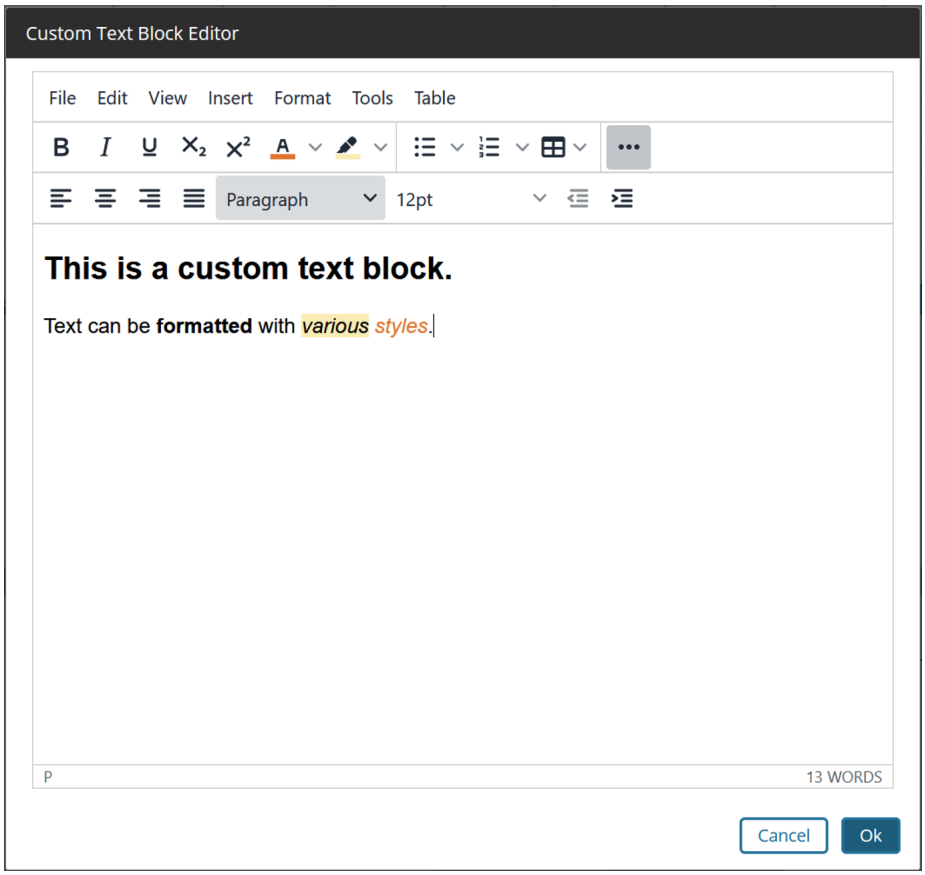
Report configuration block

Custom text and page breaking

The "Add Custom Text" will launch a full-featured text editor to add customized and formattable text and tables anywhere in the report. As with chart blocks, clicking on the entry in the report configuration section allows for updating existing content.

The rather self-explanatory "Add Page Break" button will insert a page break anywhere between any other report blocks.

Both of these report block types are able to be repositioned in the report layout configuration without restriction.



Custom text block editor

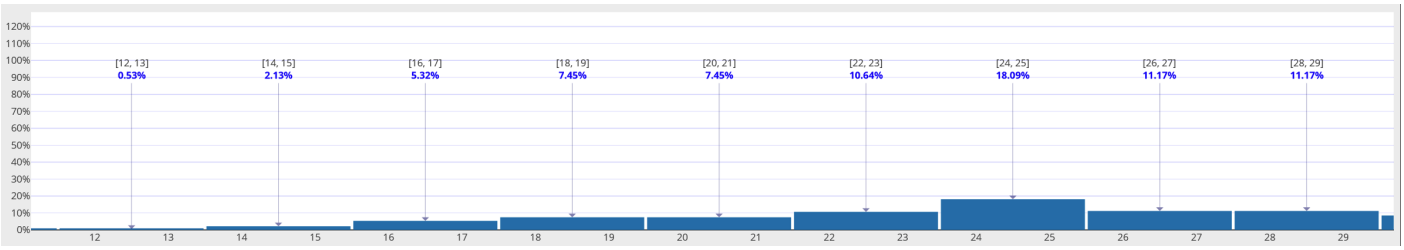
Scaling, panning and zooming

The single and multiplot chart objects have some limited interactive options and changes to the chart views are retained when saving or generating a report.

The X and Y axes are able to be scaled and panned to any desired position or level, and the chart itself can be zoomed in on, and panned.

- Axis scaling is achieved by clicking and dragging on the axis line near the corner where it intersects the opposing axis.
- Axis panning is achieved by clicking and dragging near the middle of the axis.
- Zooming into a section of the chart is achieved by drawing a rectangle around the desired area.
- Panning inside the chart is achieved by SHIFT+clicking and dragging around the pointer in the chart area.

- The chart view can be reset to default at any time by double-clicking inside the chart.
- Individual Axes can be reset by double-clicking directly on them.



Custom scale, zoom and pan

Saving, loading and deleting reports

Any report with at least one report block may be saved and loaded later. The default access control options allow for only the creator of the report to load it at a later time. To allow sharing of the report to others with access to the base test on which the report is built, the “Report visible to others with test access” checkbox must be selected at the time of saving ? this will allow others with access to the test the ability to load the report. An editor account which does not already have access to the underlying test on which the report is built upon will not have load or view rights to the saved report.

A report in the load/delete dialog created by the user may be loaded and/or deleted by that user. A report in the load/delete dialog which has been shared by another account may be loaded, but may not be removed. Only the creator or superadmin accounts may remove reports.

Descriptive statistics

A table of standard descriptive statistics (kurtosis, standard deviation, range, minimum, maximum, mode, median, mean, and population) are presented for each data series in a loaded test. These values can be downloaded in CSV format by clicking the button below the analysis table.

	K	σ	range	min	max	Mo	x̃	μ	N
Q01	-0.29	1.85	6	1	7	7	6	5.15	2002
Q02	-0.4	1.86	6	1	7	7	6	5.1	1997
Q03	-0.48	1.87	6	1	7	7	6	5.09	1996
Q04	-0.53	1.9	6	1	7	6	6	5.07	1996
Q05	-0.33	1.86	6	1	7	7	6	5.11	1992
Q06	-0.31	1.85	6	1	7	7	6	5.13	1987
Q07	-0.42	1.86	6	1	7	7	6	5.11	1986
Q08	-0.49	1.87	6	1	7	7	6	5.1	1984
Q09	-0.29	1.87	6	1	7	7	6	5.13	1981
Q10	-0.26	1.85	6	1	7	7	6	5.15	1982
Q11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1050
Q12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	818
Q13	-0.41	1.89	6	1	7	6	6	5.08	1963
Q14	-0.37	1.87	6	1	7	7	6	5.12	1964
Q15	-0.13	1.85	6	1	7	6	6	5.17	1964
Q16	-0.44	1.9	6	1	7	6	6	5.09	1957

▼ Download Descriptive Statistics (CSV)

Descriptive Statistics Box

Note that there is no assignment of numerical values to nominal data, so purely non-quantitative data series will only be able to show the population value in the descriptive statistics table.

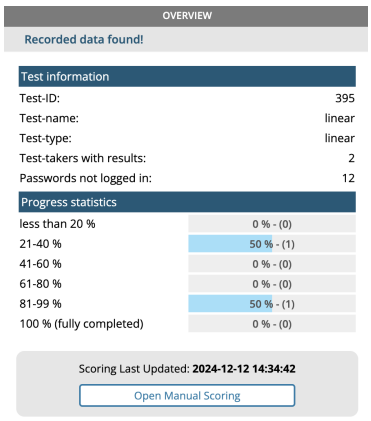
8.1.1.4 PDF Generation

After the report has been configured to the targeted specifications, clicking the “Generate PDF Report” button will generate a downloadable file with all the elements found in the “report configuration” block in standard A4 page format.

Note that the PDF output files are not saved on the server, and only the report layout and options themselves may be saved server side.

8.1.2 Results Window

The left column of the results manager shows the list of folders and tests.



For details about the results, select a test. If there are no results recorded yet, the overview column on the right shows a corresponding message.
If there are results, details are displayed in the overview column.

- **Test-ID:** The database ID of the test.
- **Test-name:** The name of the test.
- **Test-type:** Linear, fluid or mutation.
- **Test-takers with results:** Total number of test takers who logged in to the test. **This includes test takers who didn't answer any question!**
- **Passwords not logged in:** Number of passwords the test is assigned to, which were not yet used to log into the test.
- **Progress statistics:** Split into percentage ranges. Each range has a progress bar and indicates the percentage of test takers within this range along with the total number.
  The ranges are based on the total number of questions.
  The test taker percentage is based on the number of **test takers who logged in to the test**.
- **Open Manual Scoring:** Opens the test for manual scoring.

8.1.3 Manual Scoring

The manual scoring window has two tabs, **Test Taker List**, where the test takers available for scoring are listed and **Test Pages List** where the test pages containing scoreable items are listed.

Test Taker List | Test Page List

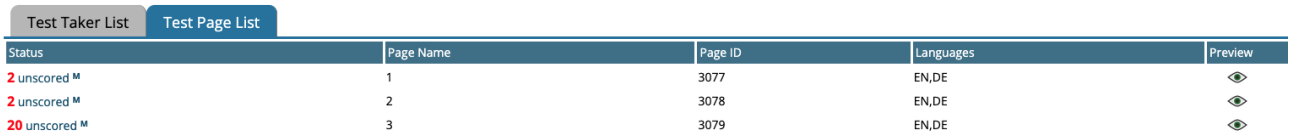
Status	Test Taker Value/ID	Test Taker Name	Password ID	Password Tag	Score	Progress	Last Connected
11 unscored	tt_001 [2321]		2671		0.00%	60%	2025-03-31 15:56:12.061
11 unscored	tt_002 [2322]		2672		0.00%	80%	2025-03-31 15:51:14.315
6 unscored	tt_003 [2323]		2673		36.36%	80%	2025-03-31 15:55:30.323

Test taker list

Columns:

- **Status:** Number of answers which are not yet scored.
- **Test Taker Value/ID:** The login name of the test taker and its database ID.
- **Test Taker Name:** If one is set (see chapters Standard Test Taker and Student Login), the test taker name of the test taker.
- **Password ID:** The database ID of the password used.

- **Password Tag:** The tag of the password, if set.
- **Score:** Score in percentage of the maximum points reachable. Items not yet scored have 0 points.
- **Progress:** Percentage of items the test taker answered. Based on the total of available items of the test.
- **Last Connected:** Timestamp of the last recorded action of the test taker.



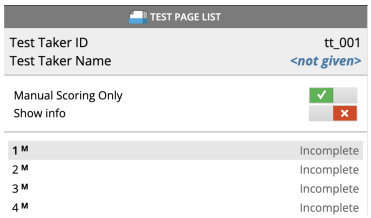
Test pages list

Columns:

- **Status:** Number of answers which are not yet scored.
- **Page Name:** Name of the page.
- **Page ID:** Database ID of the page.
- **Languages:** Languages available on the page.
- **Preview:** Click the eye icon to preview the page as it appears in the test.

8.1.3.1 Starting From Test Taker List

In the test taker list, click within the status column.

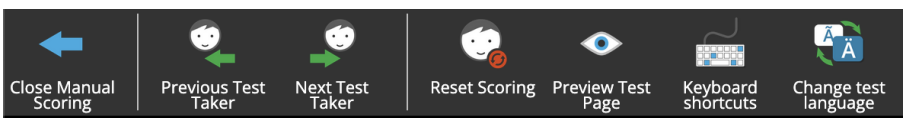


In the left column, you'll see a test page list.
Click an entry to access the test taker's scoring of the test page.
The right column of the list either indicates **incomplete** (answers left to score) or a **green square** (scored) with the number of scored answers.

Options:

- **Manual Scoring Only:** Uncheck to see autoscored items, too. Autoscored items will be in read only mode. The total score will always count autoscore.
- **Show Info:** Check for detailed information..

Menu:



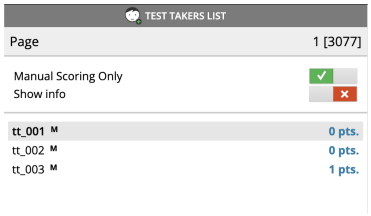
Top bar menu

- **Close Manual Scoring**
  Goes back to the list view.

- **Previous Test Taker / Next Test Taker**
  Goes back/forth in the list of scoreable test takers.
- **Reset Scoring**
  Deletes the complete scoring of the currently selected test taker for the current test.
- **Preview Test Page**
  Opens a new tab with the page as it is displayed in the test.
- **Keyboard Shortcuts**
  Opens a popup with a list of keyboard shortcuts for often needed actions in the manual scoring workflow.
- **Change Test Language**
  Switch the scoring preview between the languages the test page is available in.

8.1.3.2 Starting From Test Pages List

In the test pages list, click within the status column.

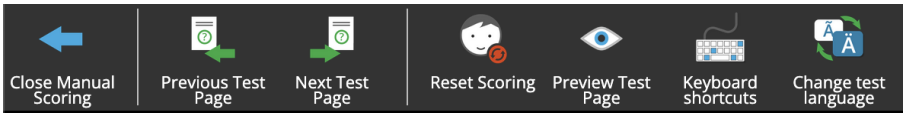


In the left column, you'll see a test taker list.
Click an entry to access the test taker's scoring of the test page.
The right column of the list indicates the test taker's scored points on the current page.

Options:

- **Manual Scoring Only:** Uncheck to see autoscored items, too. Autoscored items will be in read only mode. The total score will always count autoscore.
- **Show Info:** Check for detailed information..

Menu:

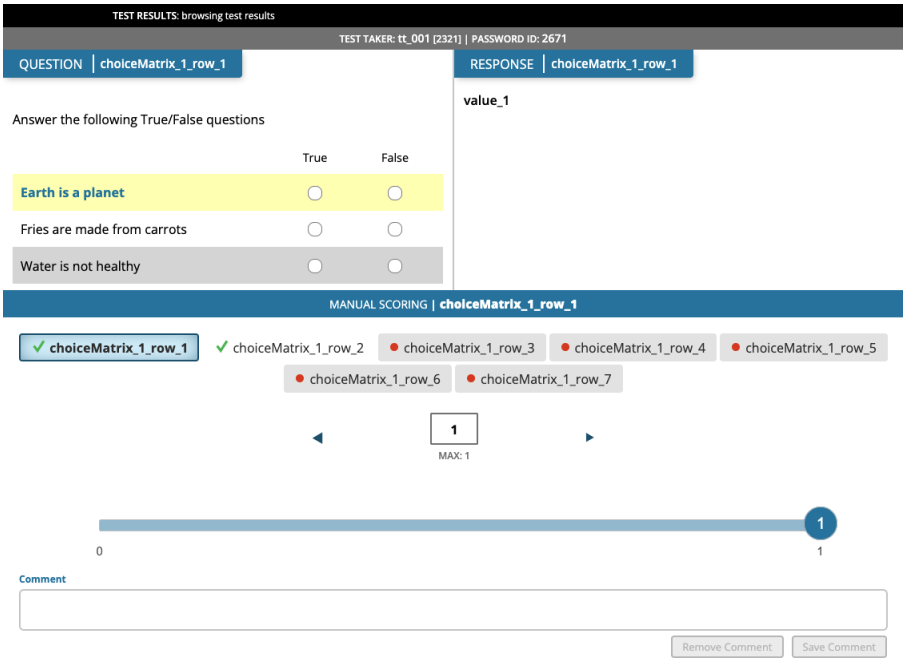


Top bar menu

- **Close Manual Scoring**
  Goes back to the list view.
- **Previous Test Page / Next Test Page**
  Goes back/forth in the list of scoreable test pages.
- **Reset Scoring**
  Deletes the complete scoring of the currently selected test taker for the current page.
- **Preview Test Page**
  Opens a new tab with the page as it is displayed in the test.
- **Keyboard Shortcuts**
  Opens a popup with a list of keyboard shortcuts for often needed actions in the manual scoring workflow.
- **Change Test Language**
  Switch the of the scoring preview between the languages the test page is available in.

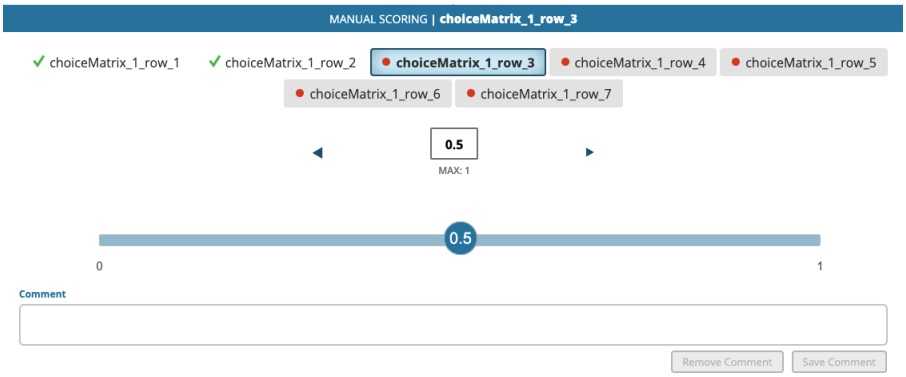
8.1.3.3 The Scoring Window

The scoring window is split in three parts. The **preview** (upper left) shows the preview of the question.
The **answer** the test taker gave is shown in the upper right part.
The **scoring** is done in the lower part.



Scoring window

How to score the questions of a test page:



Scoring

- **Navigate the questions**
  The questions of the page are listed on top of the scoring area. You can navigate them by selecting one with the mouse or clicking the back and forth arrows below.
  A green check mark indicates a scored question.
  A red bullet indicates a question which is not yet scored
  The question about to score is highlighted.

- **Check the answer given**
  When a question is highlighted, the answer the test taker gave is shown in the top right window part, above the scoring area.

- **Assign points**
  The points input is located right in the middle of the scoring area.
  You can directly write into it or use the slider below.
  You cannot exceed the maximum points defined for the question.
  You cannot go below the predefined step size.

- **Comments**
  You can save comments on your evaluation of the task.
  Just write them down in the comments field and save.

Chapter 9

Scripting

Scripting in OASYS is used predominantly to implement conditional branching in an otherwise linear test. It can read variables and act according to conditions linked to these variables.

It can also reset variables, for instance when a test is used for learning purposes and you want to loop back before an example item that was answered incorrectly.

Some arithmetic operations are also available, such as calculating sums and averages.

Finally, some internal variables of the test and the platform can be read and acted upon, such as the type of device running the test and more . . .

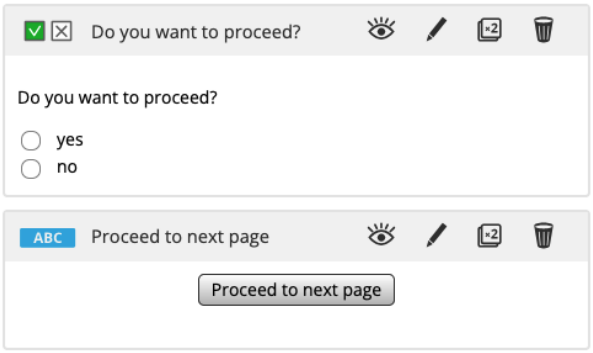
Scripts cannot, however, read the score of the test. This limitation is currently in place to avoid the risk of cheating by reading the score in the debugger of the browser and acting upon it.
This may be subject to change in the future, but for now, scripts can only react directly to the value of given answers, not to the score attributed to them.

9.1 Simple Application Examples

9.1.1 Visibility Condition

A visibility condition is a rule that determines when an interaction is shown on a page. As long as the condition is not met, the interaction remains hidden. Once the condition is fulfilled, the interaction becomes visible.
A visibility condition is always set on the interaction whose visibility is being controlled.
The condition itself checks the state of another interaction—such as the content of a text field or which option was selected in a choice.
A simple example would be showing a "Next" button only after a question has been answered with "Yes".

Quick example in action



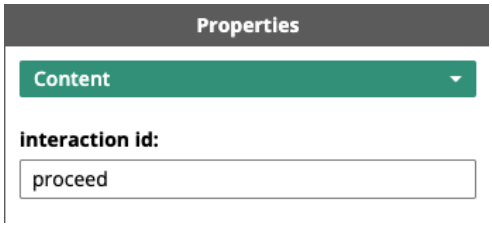
Create a page.
Within the page, create a **choice** interaction and a **button**.
Initially, the button should be invisible. When the test taker clicks the "yes" option, the button should be shown.

First, we set up the choice interaction.

Setup of the choice interaction

- Edit the question.
- Create two choices.
- The **labels (first column)** are "yes" and "no".
- The **values (second column)** are "yes" and "no".

The visibility condition will use the values of the choice!
The condition will check the state of the choice interaction. In order to make this possible, the choice needs an **interaction id**.

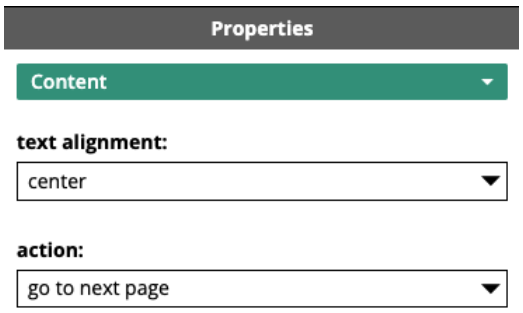


- Go to the **properties** section (right column) of the choice interaction.
- Type **"proceed"** as interaction id.
- Save the interaction.

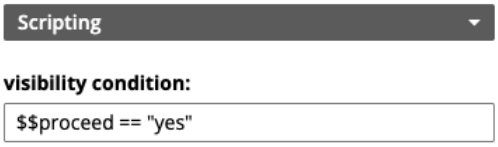
The underying concept of a condition is that of a **variable**.
A variable is a way to store information in a program. It is a name that stores a value.
By setting the interaction id, we created a variable named "proceed".
In the condition, we will ask for the value, currently stored in the variable "proceed".

Second step: Setting up the condition

- Open the button interaction.
- In the properties section (right column), set the action to "go to next page".



- In the scriptin field, type the condition.



The condition explained

- The choice with the interaction id "proceed" creates a variable proceed.
- The correct syntax to access the variable is $$proceed.
- The value of the variable is compared with a given value. In this case, the value is "yes". (The value must be in quotes!)
  == is a comparision operator and means "equals to".
- The comparision will evaluate to either **true** or **false**.
- If it evaluates to true ("yes" is checked in the choice), the condition is met and the button interaction is shown.

Comparision and logical operators

This is a very brief explanation of what you can use to set conditions in OASYS. It is, in fact, basic programming knowledge. If you want to know more, you will find basic tutorials in the web.

Comparison operators compare two values and return true or false. They're used to check conditions like equality, greater than, etc.
Logical operators are symbols used in programming to combine or compare Boolean values (true/false) and control the flow of decisions, such as AND (&&), OR (||), and NOT (!).

9.2 Scripting Reference

9.2.1 Context

There are 4 different contexts in which scripts can be used:

- **when navigating to a page** – this is used mainly to check if this page needs to be skipped in case of conditional branching, for instance if the questions only apply to those people who answered in a specific way to a previous question.
- **on input** – this script is executed when the user inputs an answer, for instance to set a variable based on the input.

- **when leaving a page** – on leaving a page, this script is executed, for instance to check if the user is sent back if they answered the example question incorrectly. It can also be used for more complex branching than just skipping the next page.
- **visibility conditions** – this script executes both on navigating to a page and on input, and is used to determine if a given element should be visible or not. This is a lighter way to implement conditional visibility, as it is integrated directly in the content editor and does not require a separate script to be written.

9.2.2 Variables

9.2.2.1 variable types

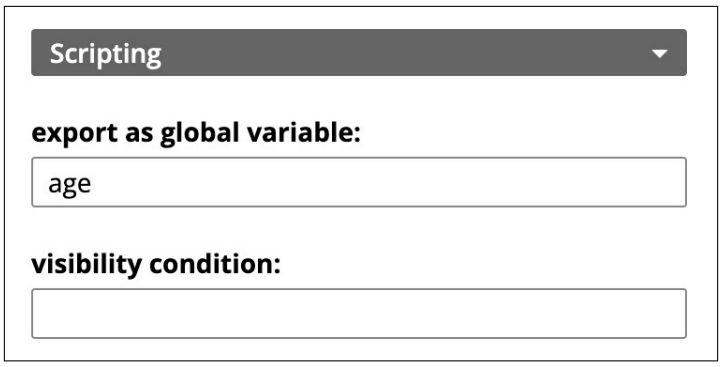
There are 3 different types of variables in OASYS:

- **internal variables** – these are variables that are set by the platform, such as the device type, selected options for the test and overrides for the current test taker, etc. They can be read but not set.
- **local variables** – these are answers given by the test taker on the current page, such as the answer to a question or the value of a slider. They can be read and set, but only on the current page.
- **global variables** – these are answers given by the test taker anywhere in the test, such as the answer to a question on a previous page. In order to make them available throughout the test, they need to be exported to a unique variable name, which is then used to read and set the value of the variable. Global variables can be read and set anywhere in the test.

When reading a variable, local variables start with two dollar signs: $$variable_name; while global variables start with a single dollar sign $variable_name.
Internal variables start with a dollar followed by two underscores $__variable_name.

9.2.2.2 exporting global variables

In order to export a local variable to a global variable, go to the properties of an interaction, open the Scripting section and enter the desired export name into the export field.



Exporting an interaction to a global variable

In the advanced editor, this is done by adding a EXPORT="variable_name" attribute to the code of the field. In case of a radio button group or a checkbox group, its sufficient to add the attribute only in the

first field of the group.

```
[@RB GROUP="gender" VALUE="female" EXPORT="gender"] [@LB]female[@/LB]
[@RB VALUE="male"] [@LB]male[@/LB]
[@RB VALUE="nonbinary"] [@LB]non binary[@/LB]
[@RB VALUE="other"] [@LB]other[@/LB]
```

Exporting an interaction to a global variable in the advanced editor

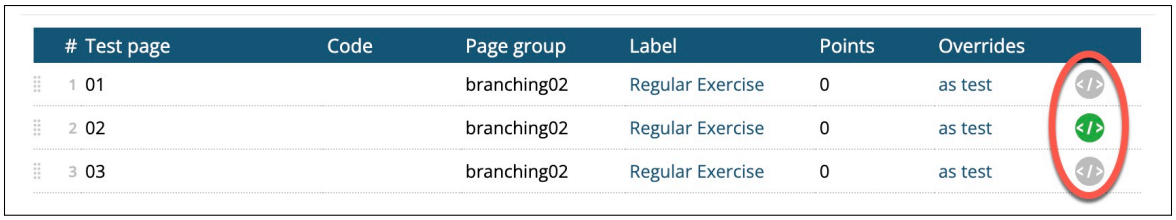
The export name must be unique, and it is recommended to use a descriptive name that indicates the purpose of the variable. Since pages are edited outside of the scope of a test, OASYS is not able to check for uniqueness of the variable name. This responsibility lies with the test author.

Beware: Meta fields like choice matrix or inline fields, where a single interaction creates multiple local variables, cannot be exported to global variables at the moment.

9.2.3 creating a script

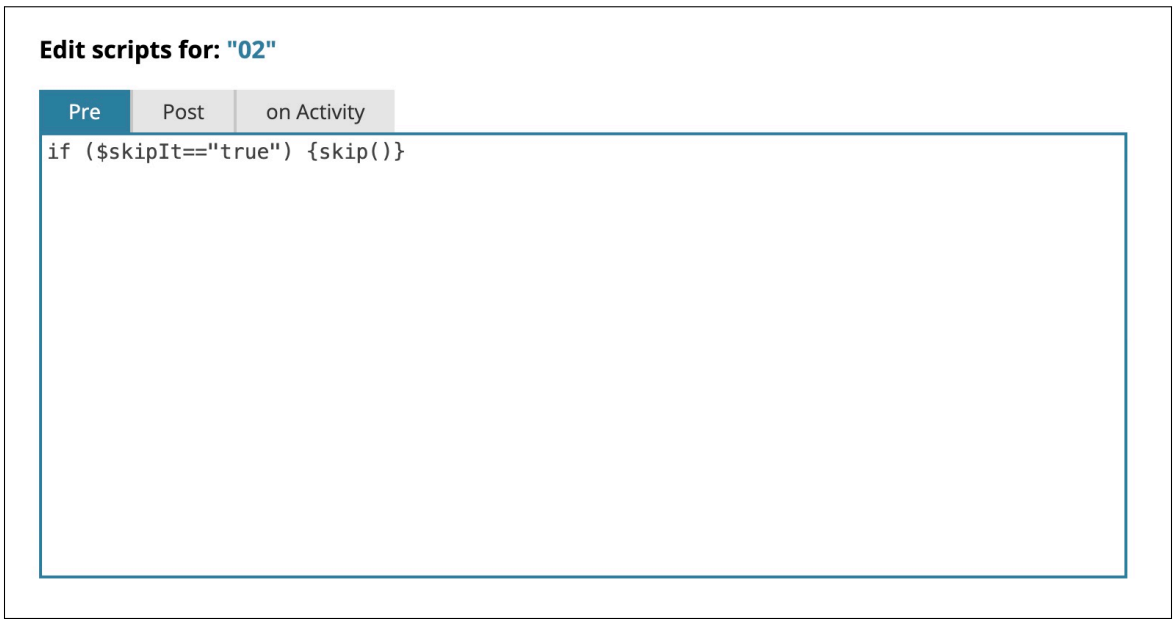
9.2.3.1 creating a script in the test manager

In the test manager create a structure and then click on the script button of the page you want to create a script for.



Creating a script for a page

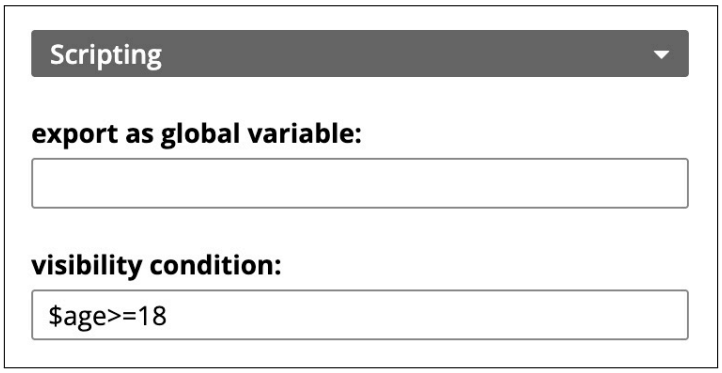
Then you can choose between three tabs Pre, Post, on Activity to define scripts for different points in time. The "Pre" script will be evaluated when you are navigating to this page, the "Post" one will be run when navigating away from the page and "on Activity" will be run when an answer is given or edited.



Choosing the context of a script

9.2.3.2 creating a visibility condition in an interaction

In the interaction editor, you do not have to create a complete script, but only a condition that will be evaluated to determine if the block is visible or not.



Creating a visibility condition in an interaction

9.2.4 syntax of a script

9.2.4.1 structure of a command

Currently, 3 base commands are available in OASYS scripts:

- **IF/ELSE** – this command is used to check a condition and execute a block of code if the condition is true and execute another block of code if the condition is false.
- **IF** – this command is used to check a condition and execute a block of code if the condition is true. If the condition is false, the script will continue to the next command without executing any code.
- **EXECUTE** – this command is used to execute a block of code without conditions.

The structures of those commands are as follows:

if (CONDITION) { ACTION } else { ACTION }

if (CONDITION) { ACTION }

execute { ACTION }

9.2.4.2 syntax of a condition

The main syntax of a condition is as follows:

TERM1 OPERATOR TERM2

The terms can be either a global or local variable as shown previously, or they can be strings or numbers.

$$variable	local variable, e.g. the answer to a question on the current page, where the variable name corresponds to the field id; they always start with two dollar signs
$variable	global variable, e.g. the answer to a question on a previous page, where the variable name corresponds to the export name of the field; they always start with a single dollar sign
$__variable	internal variable, e.g. the device type, where the variable name corresponds to the name of the internal variable; they always start with a dollar sign followed by two underscores
"string" or 'string'	a string, written either with double or single quotes, e.g. "hello world" or 'hello world' *(please make sure to use straight quotes, not curly ones)*
42	a number, which can be either an integer or a float, e.g. 42 or 3.14 (please make sure to use a dot as decimal symbol, not a comma)

Multiple conditions can be combined using the logical operators && and || for "and" and "or" respectively.

Example

Checking if age is between 13 and 17:

```
if ($$age >= 13 && $$age <= 17) {...}
```

9.2.4.3 syntax of an operator

The operators are used to compare the terms in a condition. The following operators are available:

==	equal to (for numbers or strings)
!=	not equal to (for numbers or strings)
<	less than (only for numbers)
<=	less than or equal to (only for numbers)
>	greater than (only for numbers)

>=	greater than or equal to (only for numbers)
contains	true if a group contains a specific value (only for array-type answers like checkboxes)
!contains	true if a group does not contain a specific value (only for array-type answers like checkboxes)

9.2.4.4 defined actions

A set number of actions are available in OASYS scripts. They can be used in the execute command or in the if and else blocks.

Some commands need parameters, which are given within parentheses after the command name, separated by commas. Beware that commands which do not take parameters still need the parentheses, but they are empty.

next()	Navigate to the next page, just as if the "next" button had been clicked.
skip()	Skip the current page and proceed immediately to the next page in the test; the difference to next is that this command works also when navigating backwards through the test . . . it then skips the current page and goes to the previous page in the test. This is only useful in the pre context, as it is executed before the page is rendered.
goto("page_code")	Navigate to the page with the given code (must be given as a string, even if numeric), just as if the user had clicked on a link to that page. The page code can be entered when creating a page, and it can be edited in the rename dialog as well.
reset("page_code")	Reset all answers given in the page with the given code. This is useful when creating training material and example questions are answered incorrectly.
init(var, "value")	Initialize a variable with a given value. The variable is always a global variable and only its name is written without the dollar sign. The value can be either a string or a number. If the variable is already set, it will be overwritten.
set(var, "value")	Set a variable to a given value. The variable is always a global variable and only its name is written without the dollar sign. The value can be either a string or a number. The current value of the variable will be overwritten.
increment(var)	Increment a variable by 1. The variable is always a global variable and only its name is written without the dollar sign. If the variable is not set, it will be initialized to 1.
disableNavigation()	Disable the navigation buttons on the current page. This is useful when you use branching and have multiple ending screens. Once the ending screen is reached, the user should not be able to navigate to the next page, as it belongs to a different branch of the test. Given this use case, there is no command to reenable the navigation buttons again.
show("selector")	Show an element on the page, where the selector is a CSS selector that identifies the element to be shown. This is a more detailed way to show an element than the visibility condition, as that one always targets the block it belongs to as a whole, while this command can target any element on the page.
hide("selector")	Hide an element on the page, where the selector is a CSS selector that identifies the element to be hidden. This is the exact opposite of the show command.
avg($var1, $var2, . . .)	Calculate the average of the given variables. This needs to be used together with the set or init command to store the result in a global variable. The input variables can be either global or local variables, and they must be numbers.
sum($var1, $var2, . . .)	Calculate the sum of the given variables. This needs to be used together with the set or init command to store the result in a global variable. The input variables can be either global or local variables, and they must be numbers.

Example

Initializing a variable with a value:

```
init(my_var, 41)
```

Incrementing a variable:

```
increment($my_var)
```

Calculating the average of two variables:

```
execute{set(myavg, avg($salary1, $salary2, $salary3))}
```

9.2.5 defined internal variables

The following internal variables are available in OASYS scripts. They can not be used in the init, set or increment commands, as they are read-only variables (in programming those are referred to as constants).

$__os	the operating system of the device running the test, e.g. "Windows", "macOS", "Linux", etc.
$__mobile	true if the test is run on a mobile device, false otherwise; this is useful to adapt the layout of the test to the device type, e.g. by hiding elements that are not needed on mobile devices
$__orientation	the orientation of the device running the test, e.g. "portrait" or "landscape"; this is useful to let the test taker know they should rotate their device to the correct orientation, if that's important
$__options.limitNavigation	true if the test is configured to limit navigation: test taker can only go forward, and even this is only allowed once all mandatory fields of the current page are filled in
$__options.saveResults	true if the test is configured to save results, false if test is set to keep results only in memory (e.g. for example tests)
$__options.showScore	true if the test is configured to show the score screen at the end of the test
$__options.useTimer	true if the test is configured to use a timer, false otherwise; this is useful to know if a button to end the test should be shown at the end or not
$__options.timeLimit	the time limit of the test in seconds, if the test is configured to use a timer; this shows 0 if the test is not using a timer
$__overrides.allowNavigation	true if the test taker is allowed to navigate freely through the test, in spite of the test configuration; usually those test takers are beta testers, correctors or translators who might be shown extra information
$__overrides.demoMode	true if the test is in demo mode, so not only results are not shown, but results in memory are erased on navigating to another page; this is used for showcasing a test in a hands on event
$__overrides.disableSaving	true if the test taker is configured to not save results, in spite of the test configuration; this is used for beta testers, correctors or translators who may try out a lot and reuse the same login many times
$__overrides.disableTimer	true if the test taker is configured to not use a timer, in spite of the test configuration; this may be the case for test takers with a disability who must not have a time limit; you may want to show them a button to end the test at the last page, since they will never get a time out
$__overrides.additionalTime	the additional time given to the test taker, in seconds; this is useful to know if the test taker has been given extra time for a disability or other reason; this is 0 if no additional time has been given

In all likelihood, tests will have no need for most of these constants, with the exception of the orientation and the disable timer override, which have real life applications. The others are implemented for completeness and to meet needs that may arise in the future.

Beware: The information about the os is very fickle, as it is based on information given by the browser, which is known to be unreliable (e.g. Apple's handheld devices most likely claim to be a MacOS). It is not recommended to use this information in a test, as on top of companies reporting incorrect information by default, the test taker can also spoof this.

Also the $__mobile variable is not guaranteed, as its based on whether a device supports multiple touch points, which may not be a good enough factor with future devices that may support multiple touch points but not be mobile devices.

Chapter 10

Appendix

10.1 Advanced Editor Keyword Reference

10.1.1 description

OASYS uses proprietary keywords in order to define input fields with specific attributes that allow to customise these input fields to the users' needs. Some keywords also exist for other purposes, like advanced layouting.

10.1.1.1 structure of a keyword

Every keyword follows the same syntactical rules:

- every keyword needs the opening and closing brackets [@ ... @]
- the keyword follows the opening bracket without space, e.g. [@TF ... @]
- every keyword can have a multitude of attributes
- attributes can take 2 forms:

  ATTRIBUTE="..." for attributes with a value

  ATTRIBUTE for attributes that take effect merely by being present
- attributes can be written in any order
- all fields can take the attribute OPTIONAL if a field is not mandatory
- all fields can take an EXPORT attribute, which exports the value of the field to a global variable that can be used in overviews or scripts. If the EXPORT keyword does not take a value, the variable will have the same name as the ID resp. GROUP of the field being exported. If another name is required (e.g. if fields in different pages carry the same ID) then the attribute must have a value which designates the variable name: EXPORT="var_01"
- all fields can take a COMMENT="..." attribute which does not have any influence on the content. It's used only to store additional information which can later be exported via a dedicated API.

10.1.2 scoring

OASYS allows some types of answers to be automatically graded. This is commonly the case for closed answer formats such as single or multiple choice questions. Under certain conditions it also makes sense to automatically grade textfields, if a very specific word is expected (e.g. vocabulary checks or grammar tests).

But automatically checking whether a question is correct or not is not enough. The test creator is also required to tell OASYS how many points to attribute to which question. Also sometimes not responding to a question is graded less harshly then giving a wrong answer.

In general there are 2 approaches to scoring—by adding points or by substracting points:

10.1.2.1 adding points

In this case we start out with 0 points and for every correct answer a certain amount of points are added. Sometimes a missing answer will get a smaller amount of points (e.g. 5 points for a correct answer, 2 points for a missing answer and of course no points for a wrong answer).

10.1.2.2 substracting points

In this model we start out with a given amount of points, and for every error we substract a certain amount of points. In analogy to the previous example, we would give 5 initial points, 0 for a correct answer, -3 for a missing answer and -5 for a wrong answer.

The advantage of this system plays when working with multiple choice questions. For instance there are 6 possible choices to check, 3 of which are correct. If 2 correct ones are selected but one is missing, the score will be 3 out of 5, while if only 1 correct answer is given and 2 are missing 2 * 3 points would be substracted (with 0 points being the lowest possible score) giving 0 points.

10.1.2.3 defining the score

In autograding mode we need to set 4 numbers for points to attribute. This is done with the SCORE attribute and the numbers to be given are done so in the following order: initial, correct, wrong and missing:

Example

To give 5 points for a correct answer and 2 to a missing answer the attribute would look like this:

SCORE="0 5 0 2"

However to give 5 initial points and substract 5 for a wrong answer and 3 for a missing answer, the attributes takes the following form:

SCORE="5 0 -5 -3"

The SCORE attribute is available in all field types and is not mentioned specifically in every field description and attribute list.

10.1.3 available keywords

Here is the list of currently defined keywords in OASYS. Some keywords that are still in development or being beta tested are not included, as they are subject to change.

10.1.3.1 text field

Syntax: [@TF ... @]

ID	this defines the variable name for the results of the text field; if omitted, the fields will be autonamed: tf_1, tf_2, . . . etc.
WIDTH	width of the field as CSS string, if only a number is given the unit defaults to pixels [default: 200]
MAXWIDTH	maximum width as CSS string which overrides the width if field becomes too large [default: calc(100% - 25px)]
ALIGN	text alignment; possible values: left, center, right [default: left]
PATTERN	a regular expression that defines what can be entered in the field; for a field that can accept decimal numbers only, use the following: PATTERN="^\-?(\d*[.,])?\d*$"
CORRECT	the expected value for this text field (for auto correction)
IGNORECASE	if this is present the auto corrector will ignore case
PREFILL	a value to prefill the text field with
READONLY	make the text field uneditable (usually used with a prefilled value as example of a task to do)
PLACEHOLDER	placeholder text to show in text field as long has nothing as been typed into it

A textfield without attributes [@TF@] would be 200 pixels wide, left aligned and called tf_1.

Example

A text field that accepts numbers only, 50 pixels wide, center aligned and with the name "salary":

[@TF ID="salary" WIDTH="50" ALIGN="center" PATTERN="^\-?(\d*[.,])?\d*$" @]

When defining auto correction more than one acceptable answer can be defined by separating the correct answers with a pipe symbol: |

Also beware that auto correction does not take into account the language in which an answer is given, because the test language can be changed while the test is running. It is mandatory that the correct answer from all languages of the test are defined as correct. The CORRECT attribute with its values most be given identically in all languages to be correctly recognized.

Example

Here the English and German version of a word are recognized as correct:

[@TF ID="negativeParticle" WIDTH="50" CORRECT="electron|Elektron" @]

10.1.3.2 text area

Syntax: [@TA ... @]

ID	this defines the variable name for the results of the text area; if omitted, the fields will be autonamed: ta_1, ta_2, . . . etc.
WIDTH	width of the area (in pixels) [default: 990]
MAXWIDTH	maximum width as CSS string which overrides the width if field becomes too large [default: calc(100% - 25px)]
HEIGHT	height of the area (in pixels) [default: 200]
ALIGN	text alignment; possible values: left, center, right [default: left]
PREFILL	a value to prefill the text field with
READONLY	make the text field uneditable (usually used with a prefilled value as example of a task to do)
PLACEHOLDER	placeholder text to show in text field as long has nothing as been typed into it
RESIZE	defines if the user may resize the text area; possible values: horizontal, vertical, both, none [default: none]

Example

A text area that is not mandatory, 600 pixels wide, 400 pixels heigh, left aligned and with the name "comments":
[@TA ID="comments" WIDTH="600" HEIGHT="400" OPTIONAL@]

10.1.3.3 drop down list

Syntax: [@DD ... @]

ID	this defines the variable name for the results of the drop down list; if omitted, the fields will be autonamed: dd_1, dd_2, . . . etc.
WIDTH	width of the drop down list (in pixels) [default: 200]
OPTIONS	the list of options the test taker can choose from, separated with a vertical bar (pipe)

Example

A field of gender choice could look like this:
[@DD WIDTH="150" OPTIONS="female|male|transgender"@]

The answers given by test takers are reported by a number representing the number of the choice from the list. Once data collection has started, it is imperative to not change the order of the choices or add resp. remove a choice from the list, otherwise the data given already will be corrupted.

When using a drop down in more than one language, the order of the options must be the same in all languages, otherwise the numbers given in one language correspond to the wrong answer in another language. A common mistake here would be to ask for nationality and try to alphabetize the list in every language. While the order would be "English, French, German" in English, the order changes to "Deutsch, Englisch, Französisch" in German. So when replying "German" in English, the number would be 3 which will then be interpreted as "Französisch" when switching to the German version. If alphabetical order is relevant, please use the choice interaction in OASYS' graphical user interface,

rather than the advanced editor to do this.

In order to mark an answer in a drop down list as being correct (for the sake of auto correction), an asterisk is to be added immediately after the label. Since a drop down list is a single choice field, only one answer must be marked as correct. The corresponding answer must be marked as correct in every language of the field.

Example

Which particle of an atom has a negative charge?
[@DD ID="negativeParticle" WIDTH="150" OPTIONS="electron*|neutron|proton"@]

10.1.3.4 radio buttons

Syntax: [@RB ... @]

Radio buttons allow the user to choose exactly one out of a group of several options. If a new option is selected the previously active one will be cleared again. By default radio buttons are round, which allows to distnguish them from checkboxes (see below). Once a radio button has been selected, it is impossible to clear the group again entirely.

GROUP	this defines the variable name for the results of a group of radio buttons; if omitted, the groups will be autonamed: rb_1, rb_2, ...(c.f. NG keyword)
VALUE	this is the value of an individual button within the group; the variable defined with GROUP will get this value when it is selected; if omitted, the values will be increasing numbers in order of occurrence
NG	if no GROUP is defined, using the autonaming feature, this keyword tells the parser to start a new group; the very first group does not need NG
HEIGHT	if there is necessity of bigger radio buttons (e.g. for accessibility reasons or for touch devices), the HEIGHT keyword takes a value in pixels for the diameter of the radio button.
CORRECT	if present this attribute indicates that this is the expected answer in this radio button group; alternatively to the CORRECT attribute its possible to add an asterisk after the keyword: [@RB* ... @]
NOREPLY	if present, this attribute marks this answer as identical to not replying at all to this group—that is only relevant when working with a scoring model where no answer is scored differently from wrong answers.

When a GROUP is defined, it will be applied for all following radio buttons until a new GROUP or an NG keyword is encountered.
In the same manner, the HEIGHT keyword will stick for any following radio buttons, until a new HEIGHT is set. By default, it will be set at the very first radio button, and from there it will remain unchanged until the end of the item, over all the groups. The height value always applies to the whole group; it is impossible to create radio buttons of different sizes within a single group.

Example of auto corrected radio buttons

Which particle of an atom has a negative charge?
[@RB* GROUP="negativeParticle" VALUE="electron"@] electron
[@RB VALUE="neutron"@] neutron
[@RB VALUE="proton"@] proton
[@RB VALUE="dontknow" NOREPLY @] I don't know

Example with automatically named radio buttons:

What is your gender:	default values
[@RB@] female	group="rb_1" value="1"
[@RB@] male	group="rb_1" value="2"
[@RB@] transgender	group="rb_1" value="3"
What is your marital status:	
[@RB NG@] single	group="rb_2" value="1"
[@RB@] married	group="rb_2" value="2"
[@RB@] widowed	group="rb_2" value="3"

The results of a single man would look like this:

variable	value
rb_1	2
rb_2	1

The same example again with manual naming:

What is your gender:
[@RB GROUP="gender" VALUE="F"@] female
[@RB VALUE="M"@] male
[@RB VALUE="T"@] transgender

What is your marital status:
[@RB GROUP="status" VALUE="single"@] single
[@RB VALUE="married"@] married
[@RB VALUE="widowed"@] widowed

The results of a single man would look like this:

variable	value
gender	M
status	single

10.1.3.5 checkboxes

Syntax: [@CB ... @]

Checkboxes allow the user to choose any number of choices from a group of options. This is the typical answer format for questions like "check all that apply". By default checkboxes are square and get a checkmark inside when selected. Selected options can be cleared again by clicking on the checkbox once more.

GROUP	this defines the variable name for the results of a group of checkboxes; if omitted, the groups will be autonamed: cb_1, cb_2, ...(c.f. NG keyword)
VALUE	this is the value of an individual box within the group; the variable defined with GROUP will be an enumeration of the values of all checked boxes; if omitted, the values will be increasing numbers in order of occurrence
NG	if no GROUP is defined, using the autonaming feature, this keyword tells the parser to start a new group; the very first group does not need NG
HEIGHT	if there is necessity of bigger checkboxes (e.g. for accessibility reasons or for touch devices), the HEIGHT keyword takes a value in pixels for the diameter of the checkbox
CORRECT	if present this attribute indicates that this is part of the expected answer in this checkbox group; alternatively to the CORRECT attribute it's possible to add an asterisk after the keyword: [@CB* ... @]
MAX	this number limits the number of answers possible in the group—while the default behaviour is that all checkboxes in a group can be selected, it's possible to artificially limit that. This may be useful in elections where, for instance, 2 candidates out of 10 may be selected.
RULE	this defines what is the number of expected answers. This influences the colouring of the button—if supported by the selected skin—to show if a question has been filled in completely. If the "limit navigation" option is active in the test this setting informs if a test taker can proceed to the next page or not. The syntax is as follows: for "2 or less" it's possible to write either <3 or 2-, for "3 or more" it's possible to write >2 or 3+ and "anything from 2 to 4" is written 2..4

When a GROUP is defined, it will be applied for all following checkboxes until a new GROUP or an NG keyword is encountered.
In the same manner, the HEIGHT keyword will stick for any following checkboxes, until a new HEIGHT is set. By default, it will be set at the very first checkboxes, and from there it will remain unchanged until the end of the item, over all the groups.

Example of auto corrected checkboxes

Which particles of an atom have a charge (negative or positive)?
[@CB* GROUP="negativeParticle" VALUE="electron"@] electron
[@CB VALUE="neutron"@] neutron
[@CB* VALUE="proton"@] proton

Example with automatically named checkboxes:

What kind of food do you like:	default values
[@CB@] meat	group="cb_1" value="1"
[@CB@] seafood	group="cb_1" value="2"
[@CB@] vegetables	group="cb_1" value="3"
[@CB@] fruit	group="cb_1" value="4"
[@CB@] bread	group="cb_1" value="5"
[@CB@] sweets	group="cb_1" value="6"

The results of a vegetarian might look like this:

variable	value
cb_1	["3","4","5","6"]

The same example again with manual naming:

What kind of food do you like:
[@CB GROUP="food" VALUE="meat"@] meat
[@CB VALUE="seafood"@] seafood
[@CB VALUE="vegetables"@] vegetables
[@CB VALUE="fruit"@] fruit
[@CB VALUE="bread"@] bread
[@CB VALUE="sweets"@] sweets

The results of the same vegetarian as above would now read as follows:

variable	value
food	["vegetables","fruit","bread","sweets"]

10.1.3.6 label

Syntax: [@LB ... @]some text[@/LB@]
When using checkboxes or radio buttons, you would like the test takers to be able to click on the label accompanying the checkbox or radio button. On a touch device this is all the more important.
The label keyword defines which part should be clickable. The keyword consists of an opening and a closing tag—everything in-between will be clickable. The label can also be used for text fields and text areas. In that case the field gets focused when the test taker clicks on the label.

TYPE	this defines the type of element the label is trying to attach to: "RB" for radio buttons, "CB" for checkboxes, "TF" for text fields and "TA" for text areas. You can also define "*" as type which will apply it to either checkbox or radio button but ignore text related fields. The "*" is the default setting, hence the TYPE must always be specified if linking to a text field or area.
LINK	this links the label to a specific group or field—in general this can be left out, as OASYS links the labels in order of occurrence automatically. If used, the value must be identical to the GROUP value or in case of a text field or area it must match the ID of that field.

Our previous checkbox example combined with labels will look like this:

Example

What kind of food do you like:
[@CB GROUP="food" VALUE="meat"@] [@LB@]meat[@/LB@]
[@CB VALUE="seafood"@] [@LB@]seafood[@/LB@]
[@CB VALUE="vegetables"@] [@LB@]vegetables[@/LB@]
[@CB VALUE="fruit"@] [@LB@]fruit[@/LB@]
[@CB VALUE="bread"@] [@LB@]bread[@/LB@]
[@CB VALUE="sweets"@] [@LB@]sweets[@/LB@]

10.1.3.7 slikert

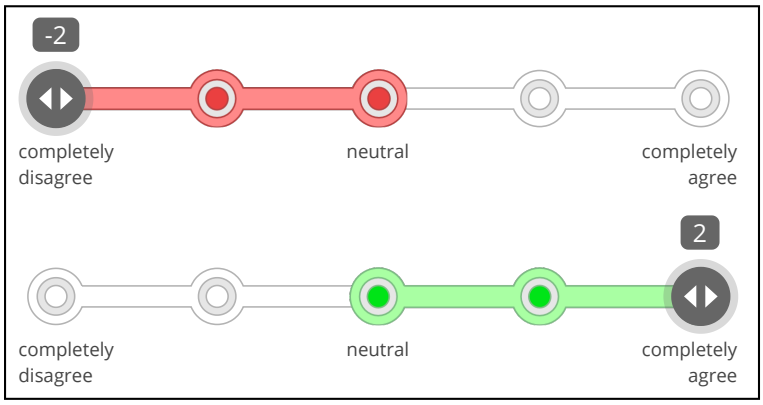
Syntax: [@SLIKERT ... @]
The slikert is a slider which is used for a likert type of answer. The slider handle will be invisible on creation and will appear only once the track has been tapped. This is to ensure that there is no starting value to influence people. Once the handle is visible it can be moved by dragging it.
A line will be drawn from a defined origin (left, center or right) to the selected value. The line to the right of the origin is green, the one on the left of the origin is red.
The slikert tries to fit on the screen if the default width is bigger than the width of the device. In a first step, the bubbles for the values are put closer together. If that is not enough the whole size of the slikert will be reduced until it fits.
LIMITATIONS: A slikert is limited to a maximum of 10 points. If a longer slikert is defined by the means of MIN, MAX and STEP, it will not be rendered. Instead an error message will be displayed.

ID	this defines the variable name for the results of the slikert; if omitted, the fields will be autonamed: slikert_1, slikert_2, ... etc.
MIN	the leftmost value of the track (an integer or decimal number; may be negative)
MAX	the rightmost value of the track (an integer or decimal number; may be negative)
ORIGIN	the origin from where the line will be drawn (may be L, C or R for left, center or right)
STEP	the amount between target values (by default 1; may be a decimal number)
MINLABEL	the label for the left end of the track (use | to force a linebreak)
CENTERLABEL	the label for the center of the track (use | to force a linebreak)
MAXLABEL	the label for the right end of the track (use | to force a linebreak)
NOREPLYLABEL	label for an additional checkbox underneath the slikert which allows to set this slikert as "not applicable"
MONOCOLOUR	if present (no value required) the slikert switches to single colour highlights—instead of red and green the highlight will always be blue no matter in which direction it goes
CORRECT	allows to switch on autocorrection—the value can be either a number or a range of numbers to consider as correct. A range from x to y uses the syntax: CORRECT="x..y"

Example with 5 values from -2 to 2 with origin in the center:

[@SLIKERT ID="opinion" MINLABEL="completely|disagree" ORIGIN="C" CENTERLABEL="neutral" MAXLABEL="completely|agree" MIN="-2" MAX="2" @]

The results of this when selecting a negative resp. a positive value:



10.1.3.8 test variable

A test variable allows to inject some data into a page which is dependant on the test it's found in. For instance if you use a default welcome page, that only changes the title each time to reflect what test this is.
Instead of creating 20 copies of the same content page with a different title each time—which is really stressful if you decide to make a change to the text, and need to do it 20 time over—you can create one page which uses a test variable as title. The appropriate text to inject here is then set in the test manager for each test.
Syntax: [@VAR ... @]

NAME	the name of the variable to insert here—this must match the name given in the test manager

Example

The title of a test could look like this:
[@VAR NAME="testtitle"@]

Advanced tip

Instead of defining the variable contents in the test manager, it can also be sent with a GET parameter called "variables" to the index.php of OASYS (usually sent together with login and password for direct login):

variables = "{testtitle: {global: true, text: {EN: 'Mathematics Intermediate'}}}"

In this example we do not want different strings per language, so the global is set to true. This means it will take the first and only defined language (EN in this case) and use it for all languages.

The variable must be transmitted in JSON encoded format as shown above.

10.1.3.9 test index

The test index keyword automatically creates an index of all stimuli in a test with a link to navigate to them directly. The main use for this is for literature tests where you will have several test pages sharing the same stimulus and a new question about the stimulus on every page.

The test index, which would be put on a separate page at the beginning, will enumerate all stimuli with their name as defined in the content manager and let the user navigate to the first occurrence of each piece of literature. Pages without a stimulus will be ignored by default, but this behaviour can be configured with an attribute.
Syntax: [@INDEX ... @]

ALL	if present (no value needed) this attribute forces the index to also show standalone pages that do not have a stimulus—by default this is off

Example

A test index that shows standalone pages as well as stimuli:
[@INDEX ALL@]

10.1.3.10 link

Links are keywords that are put around a label or piece of text in order to make it clickable for navigation purposes. Their main purpose is to combine them with an overview of given answers and allow the test taker to navigate back in order to make changes. They can navigate forward as well as backward as long as the target is found in the test structure.
Syntax: [@LINK ... @]label of the link[@/LINK@]

FIRST	if present (no value needed), this links to the first page in the structure
LAST	if present (no value needed), this links to the last page in the structure
CODE	this links to the page with the indicated item code no matter where it is found in the test structure
PAGE	this links to the indicated page (integer value) starting count at 1 up to the number of pages in the structure. This method will cause trouble when the test structure is changed, so targeting with the item code is generally a better choice. If this value is "-1" then it is a synonym of the LAST attribute.

RELATIVE	this links to another page relative to the current position. For instance "+2" would skip ahead 2 pages while "-1" would mean you go back to the previous page.

Example

Skip ahead 5 pages:
[@LINK RELATIVE="+5"@]cut to the chase[@/LINK@]

10.1.3.11 overview

The overview shows information about answers given in previous pages. It is used as a summary of sorts to be presented at the end of a test. It can also be used to show the contents of some internal variables, although those are generally used in scripting and displaying them is not very useful for the test taker. For a list of defined variables, please refer to the scripting documentation.
Overview elements can take various shapes depending on the format of the data.
Syntax: [@OVERVIEW ... @]

TYPE	this defines the visual form of the overview. The allowed values are: checkmark, value, list, progress checkmark will simply show a checkmark if a response has been given to the indicated field; if a boolean variable is displayed it shows a checkmark for true and a red X for false value shows the actual answer as is (useful primarily if the answer is a number or a short string) list shows a predefined answer from a list based on a numerical answer progress shows a small progress bar which is based on a numerical answer—behind the progress bar the actual value is also shown as text
SOURCE	indicates the name of the variable to base overview on
COLOUR	CSS colour string in which to render the overview—default is "#000000" (black)
MIN	the minimum number a numerical answer can take [only for list type and progress type]—this number can be a decimal number (positive or negative)
MAX	the maximum expected number from a numerical source (c.f. MIN for further details)
WIDTH	the width for a progress bar in CSS units—default is 50px
HEIGHT	the height for a progress bar in CSS units—default is 0.5em
FONTSIZE	the font size to use for any text output (applies to checkmark, value, list and the label next to a progress bar)—default is 1em
LIST	a list of labels to show depending on a numerical answer. The answers are separated by pipe symbols (|). If MIN has been set to -2 the first label will be displayed for the value of -2, the second for -1, etc. If the expected numbers do not increase by 1, the values need to be specified with the labels. For instance if we are expecting -4, -2, 0, 2 and 4 as values the list might look like this: *"-4: strongly disagree|-2: disagree|0: neutral|2: agree|4: strongly agree"*
HIDELABEL	this applies only to progress type and will hide the full text answer next to the progress bar

Example

A progress bar that gets data from a slikert which exports under the name "Q01" and has a scale from 1 to 7:
[@OVERVIEW COLOUR="#52B6E0" TYPE="progress" SOURCE="Q01" MIN="1" MAX="7"@]

And here we have data from a radio button group (exporting under the name Q14) which can take values 1 or 2 representing "yes" or "no":
[@OVERVIEW COLOUR="#52B6E0" TYPE="list" SOURCE="Q14" MIN="1" LIST="Yes|No"]

10.1.3.12 local timer

This creates a countdown for the currently shown page. When the timer reaches zero the test taker will be automatically navigated to the next page. It is also possible to link a few pages in order to create a countdown for a block of pages.

Syntax: [@TIMER@]

ID	this defines a name for the timer—by using the same name on several consecutive pages those pages are grouped together in the same timer and the whole block of pages is skipped when the countdown hits zero
TIMEOUT	the time of the countdown in seconds

Example

A 2 minute countdown:
[@TIMER ID="block01" TIMEOUT="120"@]

Notes

- This keyword must be put into a paragraph by its own. The paragraph will be removed completely when rendering the page.
- The ID must not be "default" which is a reserved identifier for internal use
- The local timer requires the test to limit navigation, so that the test taker can never go backwards
- The test must not have a global timer for the whole test—if it does, the local timers are ignored

10.1.4 button

Syntax: [@BUTTON ... @]

LABEL	the text to be visible on the button
NAME	same as LABEL—deprecated (for backwards compatibility)

ACTION	an action out of a predefined list to be executed on pressing the button
FUNCTION	same as ACTION—deprecated (for backwards compatibility)

List of defined actions:

endTest	ends a test as if the time was up. If there is another test attached to this pair of credentials that will be loaded, otherwise the login resp. landing page will be loaded or the score will be shown if the test was so configured
gotoLogin	takes the user back to the login resp. landing page, no matter if another test was attached to the currect pair of credentials. Also the test that was aborted will not be closed, so that it can be logged into again at a later time
nextPage	this takes the user to the next page even if conditions are not met (if limit naviagtion is enabled in the test)
previousPage	this takes the user back to the previous page, even if the navigation limit is enabled and moving backwards is not allowed

Example

A typical button to close the test (necessary if there is no test timer):
[@BUTTON LABEL="Close test" ACTION="endTest"@]

Note: due to backwards compatibility with OASYS v1.0 content, the actions are sometimes found with a set of brackets which may or may not contain paramaters. Those parameters are not evaluated by OASYS v3.0, but might be in a future version.
Thus if you see the attribute FUNCTION="endTest()", that is identical to ACTION="endTest".

10.1.4.1 css rule

Syntax: [@CSS ... @]

SELECTOR	a CSS selector as standardized by w3.org
RULES	standard CSS rules separated with semicolons

Example

Defining the padding of all table cells on page:
[@CSS SELECTOR="table tr > td" RULES="padding: 10px 5px;"@]

Notes

This keyword must be put into a paragraph by its own. The paragraph will be removed completely when rendering the page.

10.1.4.2 drag and drop

In order to create a drag and drop item two elements are necessary: a draggable than can be moved by the test taker and a dropzone where the draggable can be docked. Every dropzone represents a variable in the results of a test and it will contain the value of the draggable docked into it. Dropzones that can accept more than a single draggable will report a JSON array of values docked in it.

If some draggables should only be able to be dropped on a specific dropzone and other on another dropzone, we can define a group for a draggable and a list of groups accepted by a dropzone.
Syntax of a draggable: [@DG ... @]

VALUE	this is the value reported back by the dropzone in which this draggable has been dropped. Since values designate the different draggables, they need to be within a page
GROUP	an optional group which allows a dropzone to decide if it can accept this draggable or not
IMAGE	the url of an image to show inside the draggable
LABEL	a text label to show inside the draggable (only if not using IMAGE attribute—may contain HTML tags like <b>, <i> . . . etc.
STYLE	CSS string to apply to draggable, different rules can be separated by semicolons
CLONE	if value is non zero, this attribute makes a stencil out of a draggable—instead of moving the draggable a copy of it will be created and moved. The number of existing copies is only limited by the available space to drop them. Dropzones must be configured to accept clones for this to work.

Syntax of a dropzone: [@DZ ... @]

ID	his defines the variable name for the results of the dropzone; if omitted, the fields will be autonamed: dnd_1, dnd_2, . . . etc.
ACCEPTSCLONES	if present the dropzone will allow clones to dock there, and only clones
GROUPS	a list of groups to accept in this dropzone (c.f. GROUP attribute of draggables—if more than 1 group the names must be delimited by pipe symbols
IMAGE	the url of an image to show inside the dropzone
LABEL	a text label to show inside the dropzone (only if not using IMAGE attribute—may contain HTML code
STYLE	CSS string to apply to dropzone, different rules can be separated by semicolons
TYPE	either default or remove, whereas the latter is used to create a trashcan for draggable clones—if omitted the dropzone defaults to a normal behaviour
ONFULL	either replace to kick the previous occupant of this dropzone out to accept a new one or refuse to refuse new draggables if there is no more space for them
MAX	the count of slots available in the dropzone to accept draggables—default is 1
PADDING	number of pixels to leave between border and the position of the draggable being docked—due to technical reasons padding must be specified with this attribute instead of the STYLE attribute—if given 1 value it will be applied for all sides, if given 2 values the first is for top and bottom and the second for left and right and if 4 values are given it will be assigned in the order: top, right, bottom, left
ZINDEX	the CSS z-index value for docked draggables—by default it's 1 and it only needs to be increased if the dropzone itself has a higher z-index than 0
ORIENTATION	only for dropzones that accept more than 1 draggable: vertical or horizontal to decide how to orient the docked objects
ALIGNMENT	only for dropzones that accept more than 1 draggable: by default the objects are arranged from left to right on horizontal orientation and top to bottom for vertical orientation. To change this write either right resp. bottom into this attribute to go from right to left resp. from bottom to top.

SPACING	only for dropzones that accept more than 1 draggable: space in number of pixels to leave between 2 draggables when docking—default is 5 pixels
GRID	only for dropzones that accept more than 1 draggable: while normally every draggable gets the size it needs, it is also possible to define a fixed size for a grid (number of pixels) in order to dock objects evenly ignoring their size. If the draggables are larger than the space allotted to them, they will overlap.
ONDROP	for dropzones that accept more than 1 draggable there are 4 different configurations to decide where to place a dropped draggable when the dropzone already contains others: beginning: every new draggable is docked in front of the previous ones (that would be left if a dropzone is horizontally oriented and aligned to the left, but it would be on the right for horizontal orientation with right alignment, and similar for the vertically oriented dropzones)—this is the default setting end: every draggable is added at the end of the list, again depending on the orientation and alignment insert: the draggable is insert at the place where it is dropped. In this case it is also possible to rearrange the order of draggables inside the dropzone by dragging them to a different position auto: the draggables are ordered automatically by a value given to it (check out the ORDERBY attribute below)
ORDERBY	only for dropzones that have the ONDROP attribute set to auto: currently this can only to be set to value in order to arrange draggables automatically by their value [other configuration options to come in future versions of OASYS]
CONTAINS	a list of values of the draggables contained in this dropzone at creation time—if more than one draggable, values need to be separated by pipe symbols. If all available draggables are to start off here set this to "*"
RULE	in order to satisfy requirements for a drag and drop item and allow the test taker to proceed to next page (if limit navigation is enabled in the test) it is imperative to define what is expected. If we require a dropzone to get exactly 1 draggable its rule will have to be "1", if we expected it to contain 1 or more we set the rule to "1+" or ">0". If we expect 3 or less the rule will be "3-" or "<4". Last but not least if we want 2, 3 or 4 draggables in a dropzone the rule has to be "2..4".

Example

An example where 4 draggables must be dragged to 4 different dropzones (which would be accompanied by images not represented here). All draggables start out in the dropzone called "stock" which is expected to be empty at the end, hence its RULE="0":

[@DG ID="dg01" STYLE="width: 60px; height: 25px; border: 1px solid; padding: 10px; background-color: #E5F2F7; text-align:center;" VALUE="1" LABEL="10 cm" @]
[@DG ID="dg02" STYLE="width: 60px; height: 25px; border: 1px solid; padding: 10px; background-color: #E5F2F7; text-align:center;" VALUE="2" LABEL="4 dm" @]
[@DG ID="dg03" STYLE="width: 60px; height: 25px; border: 1px solid; padding: 10px; background-color: #E5F2F7; text-align:center;" VALUE="3" LABEL="300 cm"@]
[@DG ID="dg04" STYLE="width: 60px; height: 25px; border: 1px solid; padding: 10px; background-color: #E5F2F7; text-align:center;" VALUE="4" LABEL="7 m"@]

[@DZ ID="dz01" STYLE="width: 80px; height: 45px; background-color: #eeeeee; border: 1px solid black;" @]
[@DZ ID="dz02" STYLE="width: 80px; height: 45px; background-color: #eeeeee; border: 1px solid black;" @]
[@DZ ID="dz03" STYLE="width: 80px; height: 45px; background-color: #eeeeee; border: 1px solid black;" @]
[@DZ ID="dz04" STYLE="width: 80px; height: 45px; background-color: #eeeeee; border: 1px solid black;" @]

[@DZ ID="stock" CONTAINS="*" RULE="0" MAX="4" ORIENTATION="horizontal" STYLE="width: 356px; height: 60px; border: 1px solid black;" PADDING="7"@]

Notes

The [@DG ... @] keyword must be put into a paragraph by its own. The paragraph will be removed completely when rendering the page. The [@DZ ... @] keyword must be place in context where the dropzone is to be created.

10.1.5 Using formulas in OASYS

In OASYS it is possible to use mathematical formulas. This is possible in any editor that allows text entry (e.g. labels, etc.).

In order to add a formula OASYS uses LaTeX. There are 2 ways to use LaTeXin OASYS: as an inline formula or as a standalone line centered on the screen.

To write a formula inline the LaTeXtext is written between the starting and closing tags [$ and $]. To use a complete line use the tags [$$ and $$] instead.

Example of inline mode:

What will be the result of [x^y] if x=4 and y=2?

This will be rendered afterwards like this:

What will be the result of x^y if x=4 and y=2?

Example of full line:

[$$\frac{x}{y} = ?$$]

This will be rendered afterwards like this:

$$\frac{x}{y} =?$$