



# User Guide

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## Introduction

Kidoju is a web-based community platform to produce, share and consume highly-interactive self-corrected knowledge tests or quizzes.

Kidoju is available at <https://www.kidoju.com>.

Quizzes are often assimilated to multiple choice questions. So we sometime refer to quizzes developed with the Kidoju rich toolset as “Kidoju quizzes” or simply as “Kidojus”.

This guide is divided into the following sections:

- The current introduction,
- Definitions and concepts underlying Kidoju,
- A student guide for consuming Kidojus.
- A teacher/publisher guide for producing Kidojus.
- An advanced guide.

This guide and subsequent versions can be found at  
<https://cdn.kidoju.com/support/docs/user-guide.en.pdf>

Assets used in the tutorials can be found at  
<https://cdn.kidoju.com/support/docs/user-guide.en.zip>

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## Prerequisites

You need access to a web browser and an internet connection to follow the instructions in the current User Guide.

In line with several third party components used in the Kidoju software, we only support the current and previous versions of Chrome, Edge, Firefox, Internet Explorer, Opera and Safari on Android, iOS, Linux, macOS and Windows.

On laptops and desktops, we recommend using Google Chrome. On phones and tablets, we recommend using the native browser.

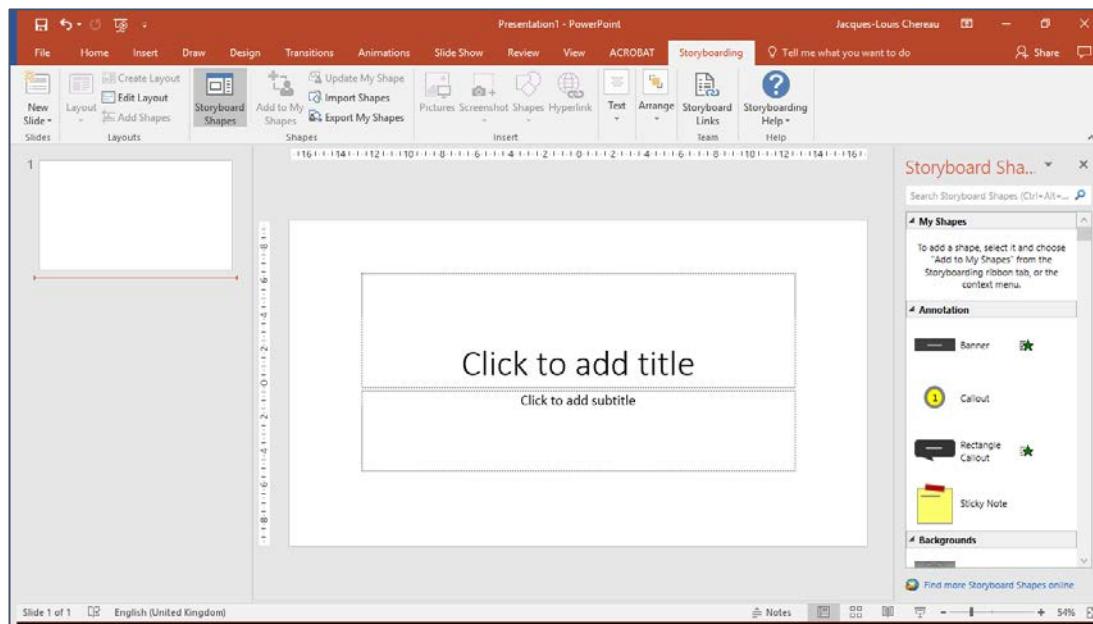
We recommend a screen of at least 5" to play Kidoju quizzes.

We recommend a screen of at least 8" to author Kidoju quizzes.

## Concepts

### Editor and Player

In Kidoju, knowledge tests or quizzes are edited and played like Microsoft PowerPoint® presentations.



There is a web-based *Editor* (aka designer) to produce knowledge tests:

The screenshot shows the Kidoju Editor interface. At the top, there are navigation buttons: Support, Explore, Search, Create, and Sign out. Below the navigation is a toolbar with icons for Details, Page, Save, Play, and Publish. The main area displays a slide titled "Body Parts (i)". On the left, there are three smaller preview boxes: "Body Parts (i)" showing a human figure with red dots at various body parts; "Body Parts (ii)" showing another human figure with red dots; and "Head Parts" showing a close-up of a head with red dots. The central slide has a title "Body Parts (i)" and a human figure with red dots. To the right of the figure is a list of body parts with corresponding blue radio buttons: Arm, Shoulder, Leg, Abdomen, Hand, Head, Foot, Chest, and Groin. A "Toolbox" panel on the right contains various icons for page management and testing logic. At the bottom, there's a "Diagnostic Console" and language/theme settings.

There is also a web-based *Player* (aka viewer) to play knowledge tests:

The screenshot shows the Kidoju Player interface. At the top, there are navigation buttons: Support, Explore, Search, Create, and Sign out. Below the navigation is a toolbar with page navigation (1-9) and a "Submit" button. The main area displays a slide titled "Body Parts (i)". It features a human figure with red dots and a list of body parts with blue radio buttons: Arm, Shoulder, Leg, Abdomen, Hand, Head, Foot, Chest, and Groin. To the right, there is an "Instructions" section with a "ABC" icon and the text: "Connect the red dots on the image to the blue dots with the corresponding labels." At the bottom, there's a "Diagnostic Console" and language/theme settings.

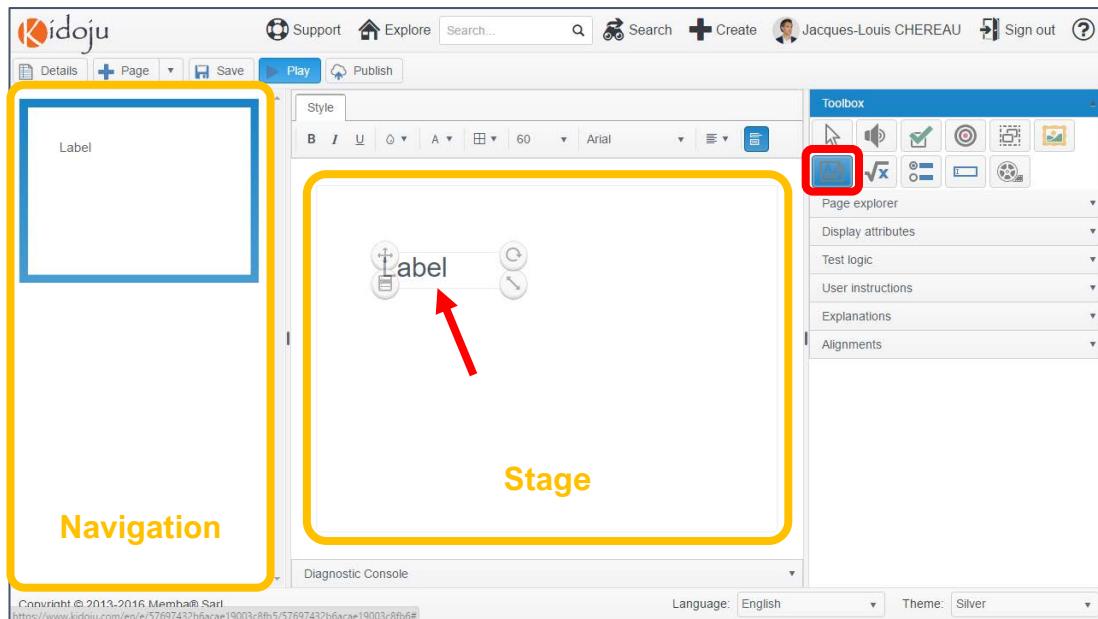
*Note: contrary to the Editor which is only web-based, the Player also runs in the Kidoju mobile application.*

## Tools, pages and components

The Kidoju web-based *Editor* provides tools to build knowledge tests. These tools include labels, radios, checkboxes, textboxes, images, audio, video, mathematic expressions, connectors, drop zones among others.

A Kidoju is divided into pages (aka slides in PowerPoint®). Each page comprises components.

The **Navigation** in the left pane of the *Editor* displays all pages in a Kidoju. Selecting a page in the navigation, displays the corresponding page in the centre pane of the *Editor*. The interactive area in the centre pane is called the **Stage**.



A tool might be used to drop a component (aka element) onto the stage. For example, a label tool can be used to drop a label component onto the stage. In such a case, the term “label” might designate the tool from the toolbox or the corresponding component dropped on the stage. The tool defines a template. The component is an instance of this template on a page.

The previous screenshot shows both the label tool selected in the toolbox and a label component dropped onto the stage, where the first and only page is selected in the navigation for editing.

*Note: for now, you only need to remember that a Kidoju is made of pages which comprise components created by tools.*

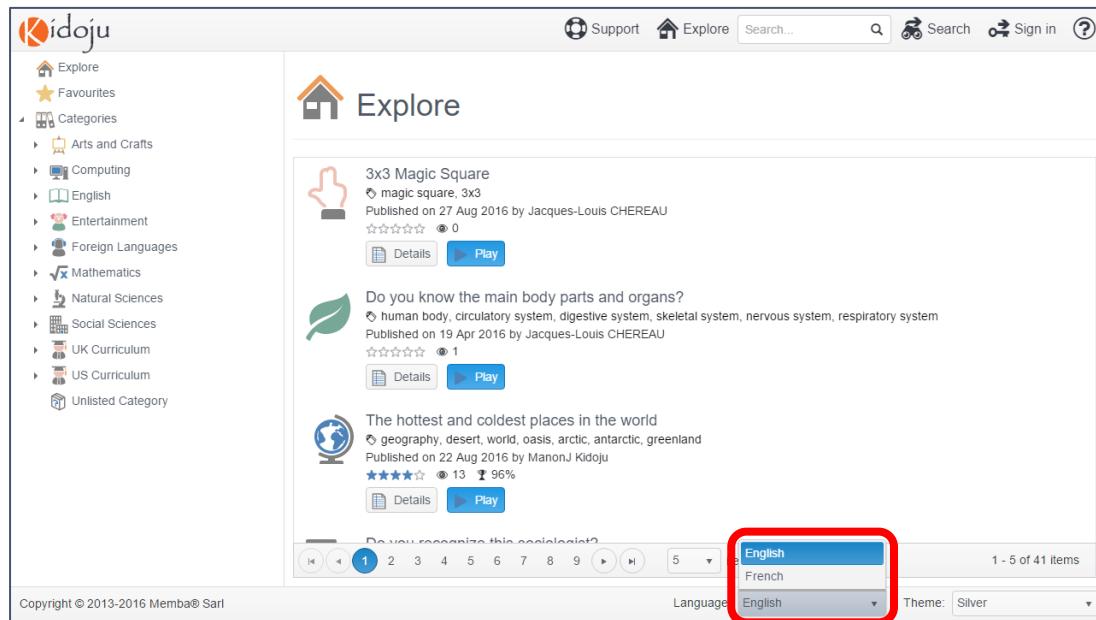
## Languages and categories

Kidojus are organised in a hierarchy of categories (aka topics) for each language.

There are currently two languages to choose from in the footer of the web application: English and French. More languages will be coming soon.

Selecting a language in the footer redirects the user to an explorer with a tree of categories (aka topics) in the corresponding language. Clicking a category in this tree displays a list of Kidojus pertaining to the selected category.

*Note: languages and categories classify Kidojus like operating systems use roots and folders to organize files on hard drives. Especially, Kidojus of a subcategory are not listed in the parent category unless such Kidojus explicitly designate such parent category.*



The screenshot shows the Kidoju 'Explore' page with three items listed:

- 3x3 Magic Square (Published on 27 Aug 2016 by Jacques-Louis CHEREAU)
- Do you know the main body parts and organs? (Published on 19 Apr 2016 by Jacques-Louis CHEREAU)
- The hottest and coldest places in the world (Published on 22 Aug 2016 by ManonJ Kidoju)

At the bottom right, there is a language dropdown menu with 'English' selected, which is highlighted with a red box.

## Indexation and searches

In addition to a language and category, Kidojus also have:

- An author,
- A title,
- A description,
- Tags (aka keywords)

These are the only data that are indexed for full-text searches.

*Note: versioned pages and components of Kidojus are not indexed for full-text searches.*

The weight of each field in the full-text index is as follows:

- Author: 8
- Tags: 4,
- Title: 2,
- Description: 1

On the basis of a search on the word “steel”, Kidojus made by authors named “Steel” will be listed first, then Kidojus that have the word “steel” among their tags will be listed second, and so on.

As a consequence, an author who designs a Kidoju about Napoleonic Wars, should make sure that Napoleon is quoted in the title or amongst tags to make it findable in a search on “Napoleon”. To increase the ranking, this author can add the word Napoleon to the title, tags and description.

## Publication, versioning and activities

Kidojus are versioned. There is no limit to the number of versions a Kidoju might have.

When initially created, a Kidoju and its first version are in a draft state until they are published. Draft Kidojus do not appear in search results and can only be played by their author. In a draft state, activities including views and scores are not tracked.

Once a Kidoju is ready to be played by others, the author should publish it. The Kidoju and its first version progress from the draft state to a published state. Thereafter, published Kidojus appear in search results and activities, including views and scores, are tracked.

Pages and components of a published version cannot be modified. The icon, title, categories, tags, description of a Kidoju can be modified at any time.

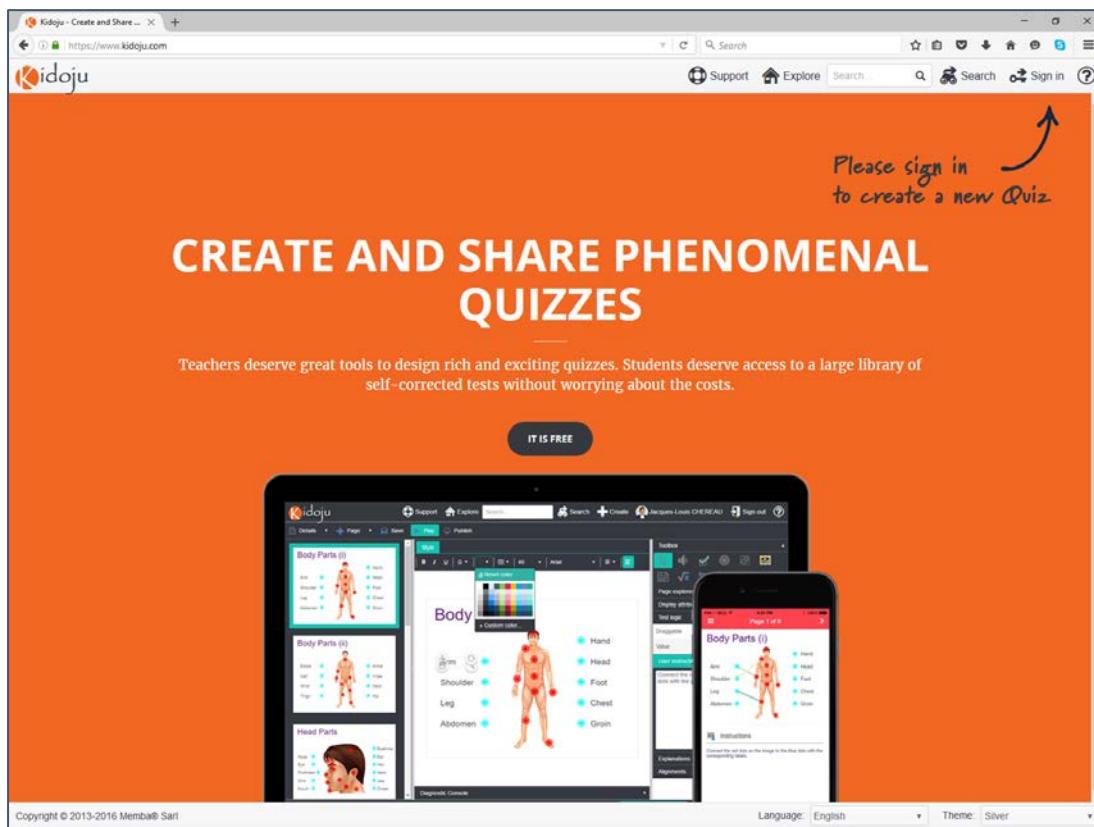
When the pages of a published Kidoju need to be updated, the author creates a new draft version. The Kidoju remains in a published state and the latest published version prevails until the new draft version is published.

Versioning Kidojus allows users to view their scores and corrections at any time although a Kidoju might have been improved with new, updated or deleted questions.

# Student Guide

## Home page

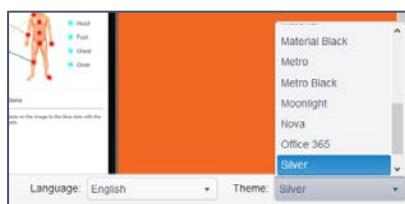
Navigating to <https://www.kidoju.com> with a web browser displays the home page in your browser language.



The language can be changed in the footer. Changing the language not only changes the UI but also the data you have access to.



By the way, the theme can also be changed in the footer, especially for those who prefer a dark theme.



Click the  **Explore** menu item in the header to navigate to the explorer.

Wherever on the web site, clicking the Kidoju logo in the header navigates back to the home page.

## Explorer

In addition to the header menu and footer we have previously mentioned, the explorer has a tree of categories (aka topics) on the left and a list of Kidojus on the right.

The screenshot shows the Kidoju Explorer interface. On the left, there is a sidebar with a tree view of categories. The 'Mathematics' category is expanded, showing sub-categories like Algebra, Analysis, Arithmetic, and Geometry. Other categories listed include Arts and Crafts, Computing, English, Entertainment, Foreign Languages, Natural Sciences, Social Sciences, UK Curriculum, US Curriculum, and an Unlisted Category. The main pane is titled 'Explore' and displays a list of Kidojus. Each Kidoju entry includes an icon, the title, a brief description, the author, publication date, average rating (5 stars), total views (1), and two buttons: 'Details' and 'Play'. The list includes entries such as 'Habeas Corpus', 'A journey through hottest and coldest places in the world', 'Countries and continents worldwide', 'Basic economic principles', and 'How well do you know the most famous economists?'. At the bottom of the main pane, there are navigation buttons for pages 1-8, a dropdown for 'items per page', and a status bar showing '1 - 5 of 40 items'.

Navigating the tree brings relevant Kidojus into the list. For example, select “Mathematics” in the tree to display all Kidojus pertaining to the Mathematics category.

*Note: categories do not aggregate subcategories. In other words, if a Kidoju has been classified in the Algebra category, but not in the Mathematics category, it would only be found by selecting the Algebra category. Categories work like Windows® and macOS® folders.*

A Kidoju is listed with its icon, title, tags, publication date, author and metrics including average rating, total (authenticated) views and average score.

This screenshot shows a detailed view of a Kidoju entry. The entry is titled 'How well do you know the most famous economists?'. It includes an icon of a building, a brief description mentioning economics, economists, monetarist school, nobel prize, famous economists, neoclassical, classical, keynesian, and 18+, the author Alexandre MADELAINE, the publication date (21 Apr 2016), and the average rating (1 star). Below the description, there is a 'Details' button and a 'Play' button.

*Note: Being authenticated is not required to view and play Kidojus and anonymous views are not counted.*

Each Kidoju in the list has two buttons respectively entitled **Details** and **Play**.

Clicking the icon or title is the same as clicking the **Details** button.

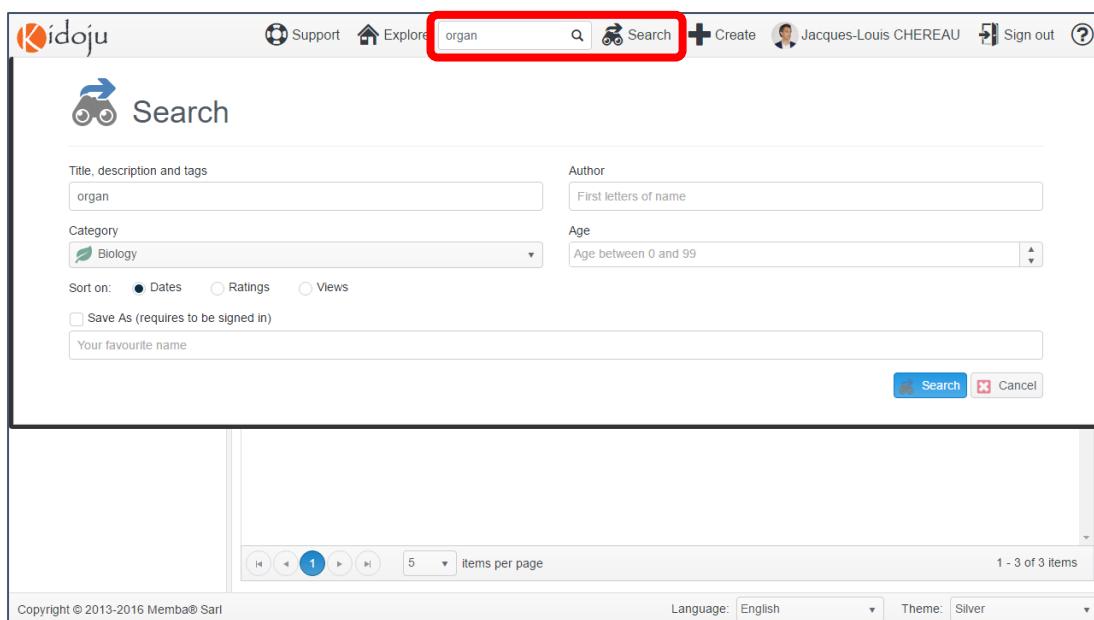
Clicking any tag displays all Kidojus that have the same tag.

Clicking the author name displays a full author profile with a list of Kidojus by the same author.

## Searches

The quickest way to make a search is to type a word like “organ” in the **Search...** textbox of the header and to click the magnifier or simply press the **Enter** key.

There is also a  **Search** button that expands the advanced search panel, for complex searches like “organ” in the “Biology” category.



## Details page

The Details page is also called the summary page. It represents the detailed summary of a Kidoju. Think of it as an index card in a library catalogue as opposed to the book itself.

The screenshot shows the Kidoju Details page for a specific Kidoju titled "A journey through hottest and coldest places in the world". The page is divided into several panels:

- Properties**: Contains fields for Title (A journey through hottest and coldest places in the world), Categories (Geography), Tags (geography, english, desert, world, oasis, arctic, antarctic, greenland), Min. Age (12), and Max. Age (15).
- Description**: A text area containing "Ten questions to discover the hottest and coldest places in the world. Are you ready ?"
- Scores**: A histogram showing user scores from 0% to 100% in 5% increments.
- Author**: Displays the author's profile picture and name (ManonJ Kidoju).
- Share**: Buttons for sharing on social networks (Facebook, Google+, LinkedIn, Pinterest, Twitter) and an **Embed** tab.
- Statistics**: Shows Created (01 Apr 2016) and Published (26 Apr 2016) dates, and a Views counter.

At the bottom, it says Copyright © 2013-2016 Memba® Sarl, Language: English, and Theme: Silver.

The Details page is divided into the following panels.

In the left (larger) column:

- The **Properties** and **Description** panels contain the fields that are indexed for full-text searches.
- The **Scores** panel displays a distribution of user scores in a histogram graduated from 0% to 100% with a step of 5%.
- The **Comments** panel displays a list of comments. A user needs to be signed in (authenticated) to add comments.

In the right (narrower) column

- The **Author** panel displays a short profile. The name is clickable to display a full profile in a *User page*.
- The **Share** panel displays a list of buttons to share Kidojus on social networks. The **Embed** tab is explained in the Advanced Guide.
- The **Statistics** panel displays statistics about the current Kidoju. A user needs to be signed in (authenticated) to rate a Kidoju by clicking any number of stars.
- The **QR Code** panel displays a machine-readable visual code which can be used to retrieve a Kidoju, especially with the Kidoju mobile application.

*Search on “QR Code” in the Apple App Store or in the Google Play Store to find QR Code readers for your mobile devices.*

As a guest (anonymous) user, there are only two use cases that can be completed from the details page of a Kidoju:

- Play a specific version of a Kidoju;

- Share a Kidoju on social networks including Facebook, Google and Twitter.

As a signed-in (authenticated) user, who is not the author, there are two more use cases that can be completed from the details page of a Kidoju:

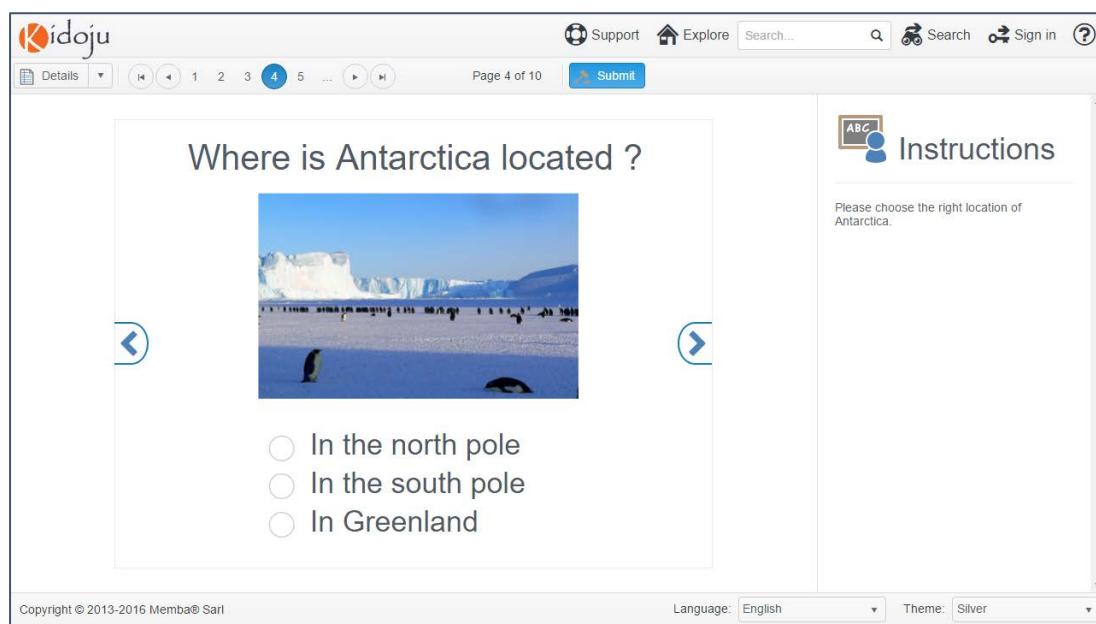
- Rate a Kidoju;
- Comment a Kidoju.

In addition to being authenticated, you are also the author of a Kidoju, you can:

- Edit a Kidoju.

## Player

Clicking the **Play** button from the *Details page* or from the *Explorer* navigates to the Kidoju player. Any version can be played from the *Details page* whereas only the current (latest) published version can be played from the *Explorer*.



The screenshot shows the Kidoju player interface. At the top, there's a toolbar with 'Support', 'Explore', a search bar, and 'Sign in' options. Below the toolbar, the page number 'Page 4 of 10' is displayed. The main content area contains a question: 'Where is Antarctica located ?'. Below the question is a photograph of penguins on a snowy landscape. To the left of the photo is a blue left arrow icon, and to the right is a blue right arrow icon. Below the photo is a list of three options, each preceded by a radio button:

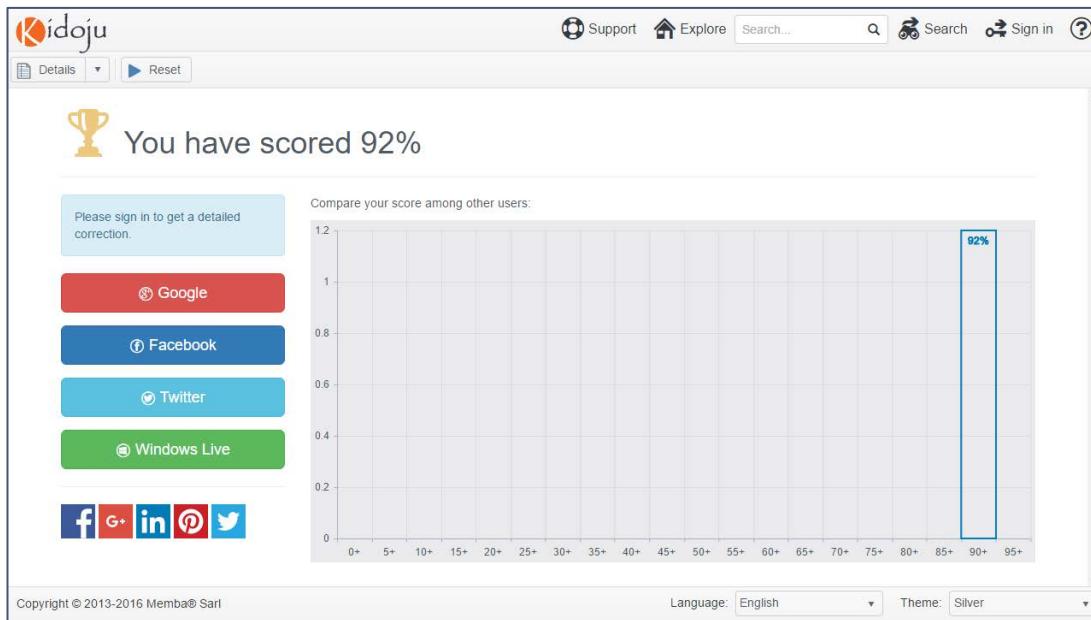
- In the north pole
- In the south pole
- In Greenland

To the right of the question area is a sidebar titled 'Instructions' with the text 'Please choose the right location of Antarctica.' At the bottom of the page, there are copyright information ('Copyright © 2013-2016 Memba® Sarl'), language and theme selection dropdowns ('Language: English' and 'Theme: Silver'), and a 'Submit' button.

To move from page to page, either use the left and right arrows on the page or click the numbered buttons in the toolbar.

**Note:** navigating between pages stores user entries in the browser.

After having navigated all pages and answered all questions, click the **Submit** button to calculate your score.



Click the **Reset** button to replay the current Kidoju from the beginning. If you are not authenticated your previous score is lost.

## Benefits of being signed in

Kidoju does not force users into being signed in to withdraw benefits from the platform. In particular searching and playing Kidojus does not require being authenticated.

The platform does not keep track of anonymous user activities. Especially view counts discard anonymous users.

Being signed-in as a student (or consumer of Kidojus) provides 3 additional benefits:

- Authenticated users can access corrections.
- Authenticated users can comment and rate Kidojus.
- Authenticated users can keep track of their activities and scores.

Signing in, using a Google, Facebook, Twitter or Windows Live account, after submitting a score, sends your answers to our servers, so that we can save them and display your detailed results in a grid below the score chart.

*Note: the only information we get from this authentication procedure is your name, picture and email address. Kidoju does not read your social network contacts and messages. We also do not get any authorization to write to your wall or send messages to your contacts. Your name and picture are displayed in miscellaneous places. Your email address is never disclosed.*

Page	Question	Answer	Solution	Score	Result
1	What is the definition of a desert ?	An area of land where nothing can live	An area of land where living conditions are hostile for plants and animals	0	
2	Where are cold deserts located ?	In polar regions	In polar regions	1	
3	What is the name of this famous hot desert of Africa ?	sahara	Sahara	1	
4	Where is Antarctica located ?	In the south pole	In the south pole	1	
5	What is the main source of water in hot deserts ?	Oasis	Oasis	1	
6	Inuits-Greenland	Inuits-Greenland	Inuits-Greenland	1	
6	Sedentary-one place	Sedentary-one place	Sedentary-one place	1	
6	Tuareg-Sahara	Tuareg-Sahara	Tuareg-Sahara	1	
6	Nomads-move	Nomads-move	Nomads-move	1	

Clicking a line in the results grid sends you directly to the page with the correction displayed as a tick or a cross with explanations:

Correction Score

What is the name of this famous hot desert of Africa ?

sahara

Explanations

This desert is Sahara. It is the widest hot desert in the world.

*Note: Notice how instructions in play mode have turned into explanations in review (correction) mode.*

You can always switch back to the score chart and results grid by clicking the **Score** button in the toolbar.

The **Reset** button replays the Kidoju from the beginning. If you are not authenticated your previous score is lost.

Assuming you have played a Kidoju several times as an authenticated user, therefore saving your score at each attempt, a dropdown list in the toolbar gives you access to the history to check your progresses on each page.

The screenshot shows a Kidoju Details page. At the top, there is a dropdown menu with three items: "22 Aug 2016 (92%)", "22 Aug 2016 (85%)", and "22 Aug 2016 (85%)". The first item is highlighted with a red box. Below the dropdown, there is a question: "What is the name of this famous hot desert of Africa ?" A text input field contains the answer "sahara" with a green checkmark icon next to it. Below the input field is a photograph of sand dunes. To the right, there is a sidebar titled "Explanations" with the text "This desert is Sahara. It is the widest hot desert in the world." At the bottom of the page, there are copyright and language/theme information.

## User page

The User page displays a user profile. A profile has public and private fields. Private fields like emails and activities are only accessible to their owner. In other words, you do not see the same fields whether you display your own profile or someone else's profile in a User page.

### Author profiles

Author profiles can be accessed when clicking an author's name in the *Explorer* or on a *Details page*.

The screenshot shows the Kidoju Explorer page. On the left, there is a user profile for "Jacques-Louis CHEREAU" with a small profile picture. The profile includes fields: First name: Jacques-Louis, Last name: CHEREAU, and Member since: 02 Mar 2016. To the right, there is a list of "Kidojus" (activities) with two items visible:

- Do you know the main body parts and organs?** Published on 19 Apr 2016. Rating: 5 stars. Buttons: Details, Play.
- Kidoju Demonstration** Published on 16 Apr 2016. Rating: 5 stars. Buttons: Details, Play.

At the bottom, there are navigation buttons for the list, a page size selector (5 items per page), and a footer with copyright and language/theme information.

Author profiles display the full name, a picture and a list of contributions.

## My profile

You need to be signed in to display your own user profile by clicking your name in the site navigation at the top of the page.

Profile

First name: Jacques-Louis  
Last name: CHEREAU  
Email: [REDACTED]  
Member since: 02 Mar 2016

Description

Google

Name: Jacques-Louis CHEREAU  
Email: [REDACTED]

Kidojus

- Do you know the main body parts and organs?  
Published on 19 Apr 2016  
Rating: 0%  
Edit
- Kidoju Demonstration  
Published on 16 Apr 2016  
Rating: 5%  
Edit
- A sample test  
TODO  
Unpublished.  
Rating: 0%  
Edit
- Counting from one to ten  
TODO  
Unpublished.  
Rating: 0%  
Edit

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Your user profile gives you access to your list of activities including your recent scores.

Type	On	Title	Score
Test	22 Aug 2016	The hottest and coldest places in the world	92%
Test	22 Aug 2016	The hottest and coldest places in the world	85%
Image	22 Aug 2016	Do you recognize this sociologist?	
Image	22 Aug 2016	The hottest and coldest places in the world	
Image	22 Aug 2016	The hottest and coldest places in the world	

Activities

1 - 5 of 36 items

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Clicking a score in the list of activities displays the corresponding detailed report which you can review at any time.

 Support Explore Search...  Search Create Jacques-Louis CHEREAU Sign out ?

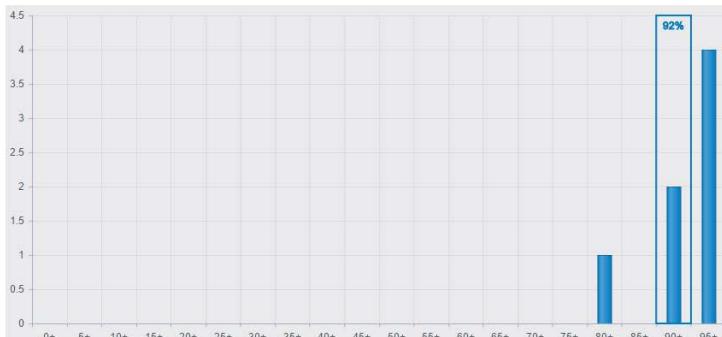
Details 22 Aug 2016 (92%) Correction Score Reset

 You have scored 92%

Please rate and share your experience.

★★★★★     

Compare your score among other users:



Score	Result
80+	1
90+	2
92%	4.5
95+	4

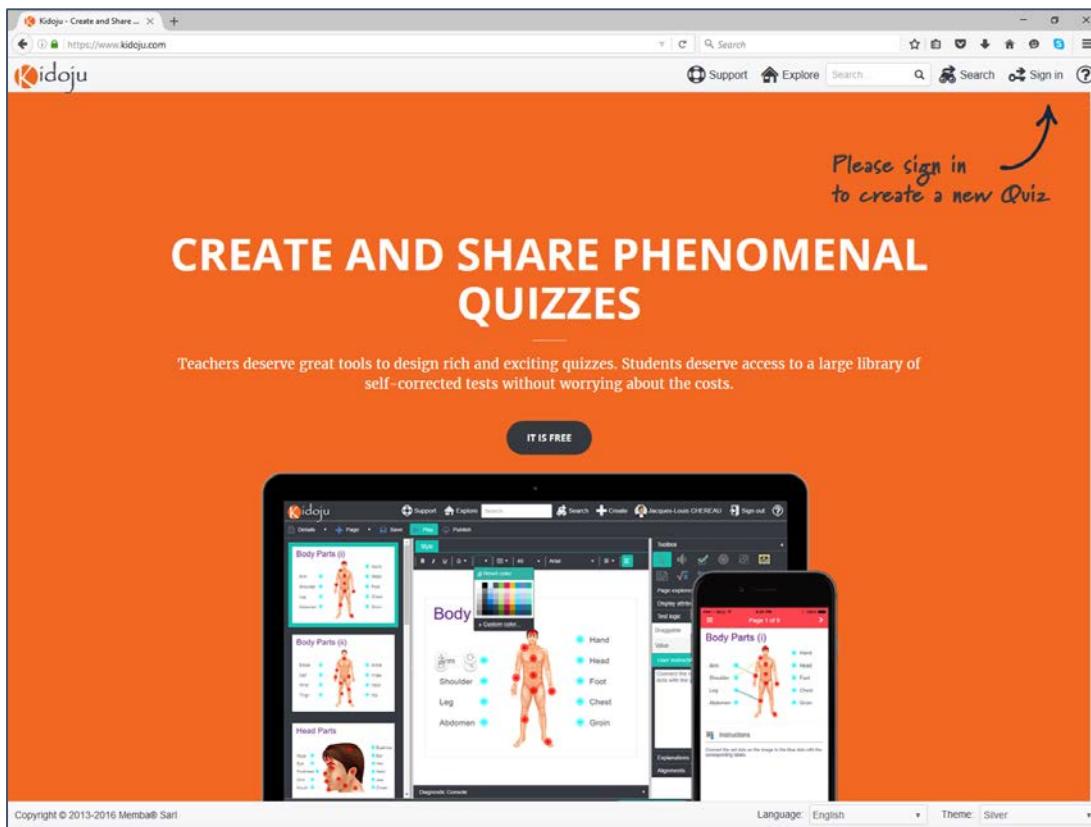
Copyright © 2013-2016 Memba® Sarl Language: English Theme: Silver

## Teacher Guide

*Note: Please start with the student guide which includes features relevant to teachers (authors).*

### Home page

Navigating to <https://www.kidoju.com> with a web browser displays the Home page in your browser language.

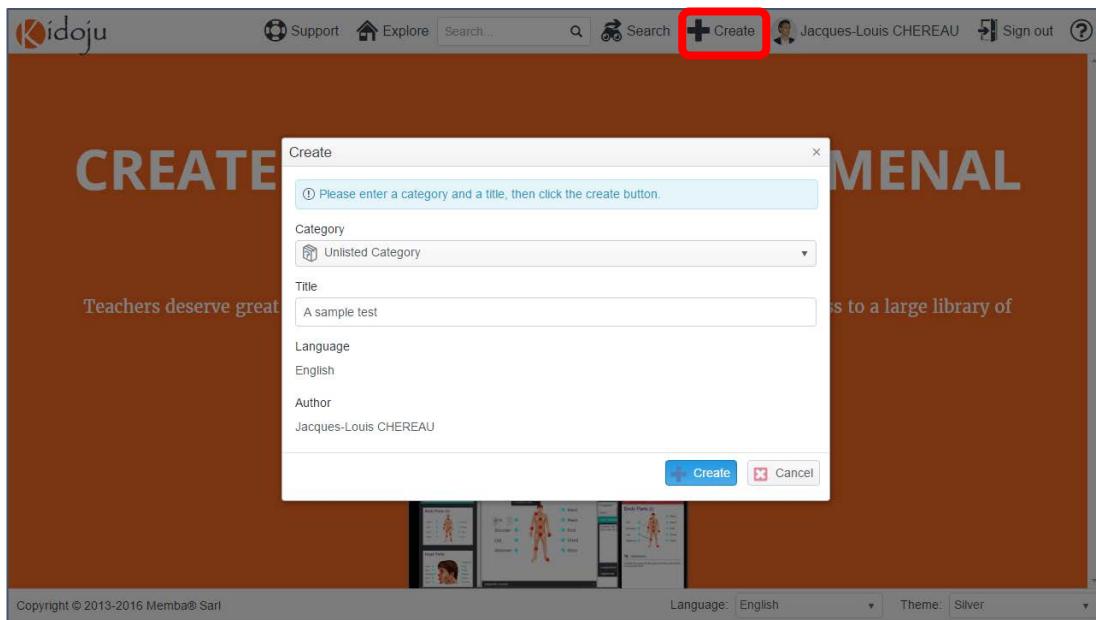


Authors need to sign in to create Kidoju quizzes. Click the **Sign in** button in the site navigation at the top of the page, then choose an authentication provider amongst Google, Facebook, Twitter and Windows Live, enter your account name and password, and allow our application.

*Note: the only information we get from this authentication procedure is your name, picture and email address. Kidoju does not read your social network contacts and messages. We also do not get any authorization to write to your wall or send messages to your contacts. Your name and picture are displayed in miscellaneous places. Your email address is never disclosed.*

After signing in, click the **Create** button which is now available in the site navigation at the top of the page. A dialog window is displayed. Fill the category

and title. The category determines the default icon. These can be modified at any time when required.



Once you are happy with your entries, confirm by clicking the **Create** button at the bottom right of the dialog window. You have just created a blank Kidoju and you are now redirected to the editor.

## Retrieving a draft test

Before we describe the *Editor*, you need to know how to retrieve a draft Kidoju in progress, considering only published Kidojus are listed in the search results of the *Explorer*.

After signing in from the *Home page* as explained above, click your name in the site navigation at the top of the page to access your profile in a *User page*.

The screenshot shows the Kidoju user interface. On the left, there's a profile sidebar with basic information: First name: Jacques-Louis, Last name: CHEREAU, Email: [redacted], and Member since: 02 Mar 2016. Below that is a 'Description' section. To the right, a list of 'Kidojus' is displayed. The first item is 'A sample test', which has a red box around its 'Edit' button. Other items include 'Counting from one to ten', 'Kidoju Demonstration', and 'Do you know the main body parts and organs?'. Each item has 'Details', 'Play', and 'Edit' buttons below it. At the bottom, there are language and theme selection dropdowns.

The Kidoju you have just created is first in the list. Click the **Edit** button to navigate to the *Editor*.

## Editor

The editor is organized like Microsoft® PowerPoint®.

The screenshot shows the Kidoju Editor interface. It's divided into three main sections: 
 

- Navigation**: A vertical pane on the left containing a list of pages (slides).
- Stage**: The central workspace where a single slide is displayed in design mode.
- Tools**: A vertical pane on the right containing various editing tools and panels, such as the Toolbox, Page explorer, and Test logic.

 The entire interface is framed by a blue border. Labels 'Navigation', 'Stage', and 'Tools' are overlaid on their respective sections.

The screen is divided into three panes between a header including the toolbar and a footer:

- On the left, the **Navigation** pane consists in a list of pages (aka slides in PowerPoint®), any of which can be selected by clicking it;
- In the centre, the **Stage** pane displays the selected page in design mode for editing;

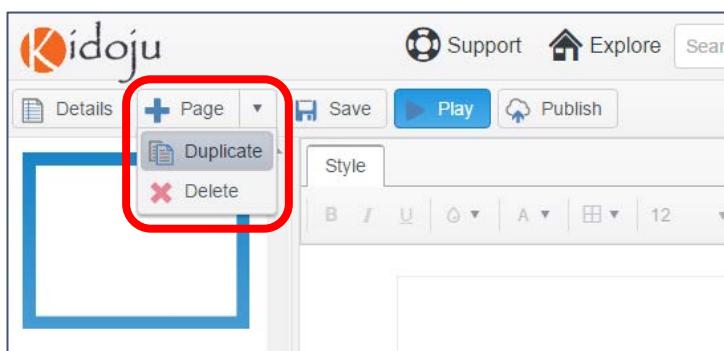
- On the right, the **Tools** pane displays collapsible panels to select tools and assign values.

We like to say that Kidojus are PowerPoint® presentations with the ability to ask questions, record user answers and calculate a score. These answers can not only be plain values but also user interactions including clicks and drag and drop sequences.

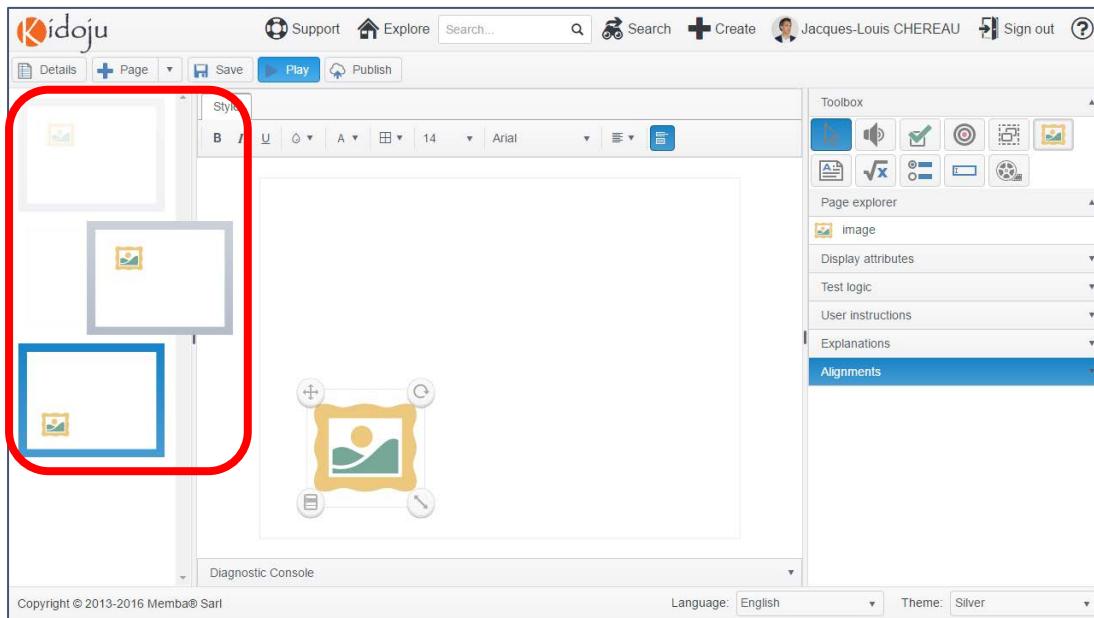
*Note: Contrary to PowerPoint®, Kidoju is web based software involving a complex architecture starting with your browser on your device, multiple nodes on the Internet which we have no control of, a firewall, a load balancer, web proxies, application servers and database servers. Although we do our best to give you the best experience, anything can happen at any location in the chain. Accordingly, please consider saving often.*

## Adding, removing, duplicating and sorting pages

The **Page** dropdown button in the toolbar contains all actions pertaining to a page except sorting. These actions include adding pages, deleting pages and duplicating pages.

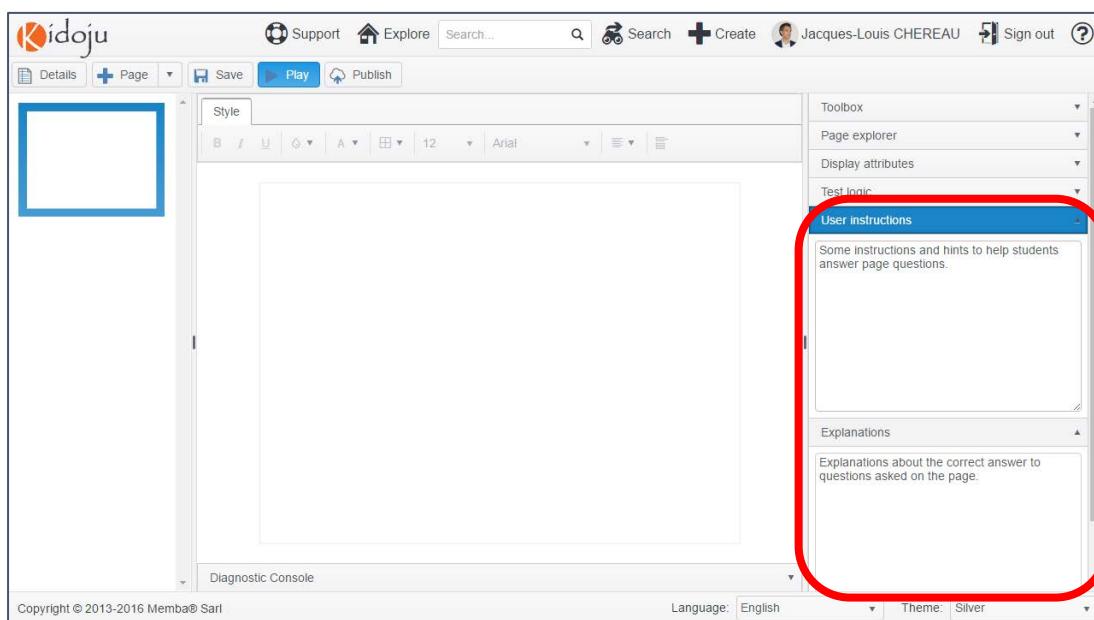


Sorting pages consists in dragging and dropping pages in the navigation pane as shown here below (we have added image components to make pages more visible in the following screenshot):



## User instructions and explanations

User instructions and explanations need to be set at the page level. Expand the corresponding collapsible panels in the tools pane and fill the text area as shown here bellow.



*User instructions and explanations support markdown. For more information, see the Markdown chapter in the Advanced Guide.*

User instructions are displayed alongside the corresponding page in the Kidoju player in play mode as in the example below.

Where is Antarctica located ?

In the north pole  
 In the south pole  
 In Greenland

Please choose the right location of Antarctica.

Instructions are replaced with explanations in review (correction) mode.

## Adding, removing, duplicating and sorting components

To add a component to a page, expand the toolbox in the tools pane, click on the tool you want to use, then click on the stage in the middle pane to add the corresponding component:

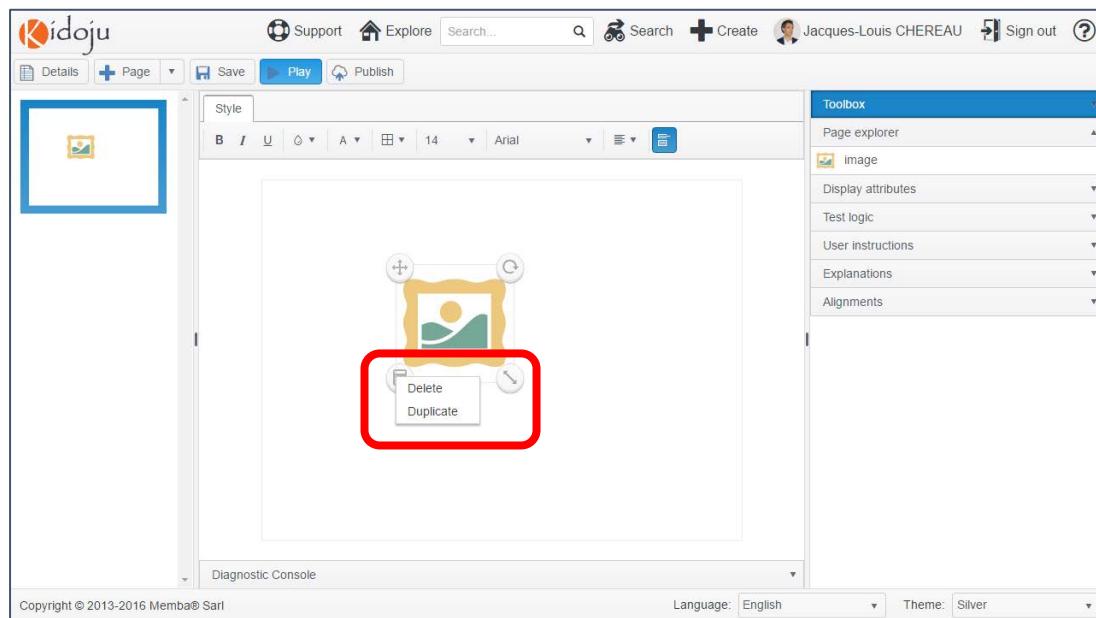
The 'Toolbox' on the right side of the editor interface is highlighted with a red box. It contains various icons for different component types: a cursor, a speaker, a checkmark, a target, a rectangle, a circle, a document, a checkmark with an 'X', a square, and a gear.

When a component is selected (simply click on the component to select it), it is displayed with a bounding rectangle and four handles located in the corners of that rectangle:

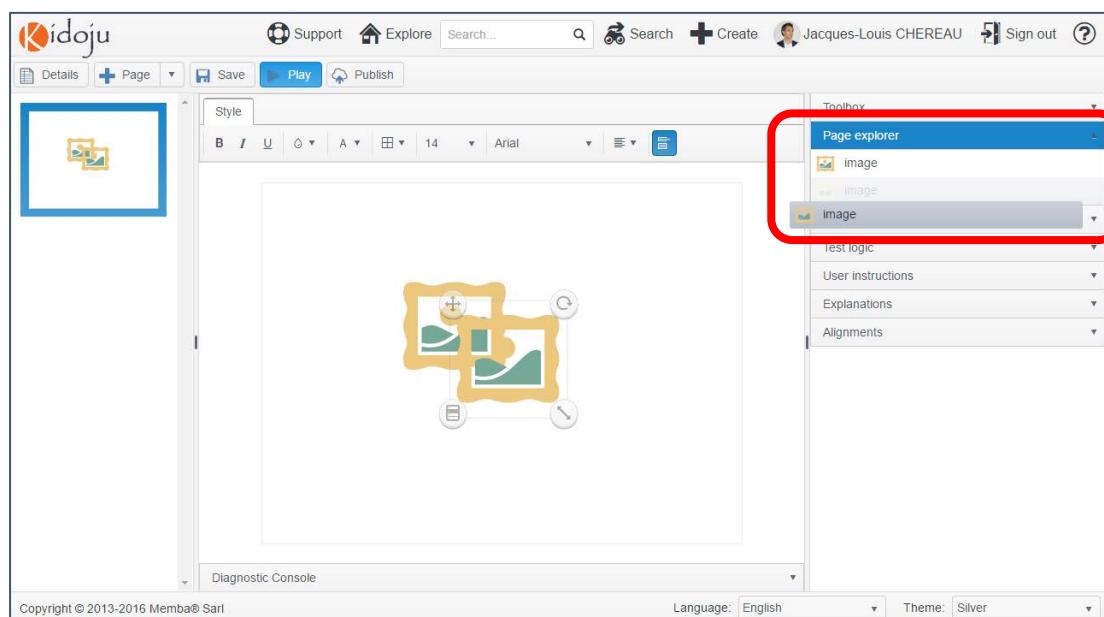
- The top left handle is the move handle;
- The top-right handle is the rotate handle;

- The bottom-right handle is the resize handle;
- The bottom-left handle is the menu handle.

Click the menu handle to display commands to **Delete** and **Duplicate** the component.



After duplicating the image component, expand the **Page explorer** panel in the tools pane and drag its items to move them forward or backward (one on top of the other). Play with sorting and check which image displays on top of the other.



*Note: when an image has been added to the stage after a label, it is displayed on top of that label. You need to change the order of components to display the label on top of the image.*

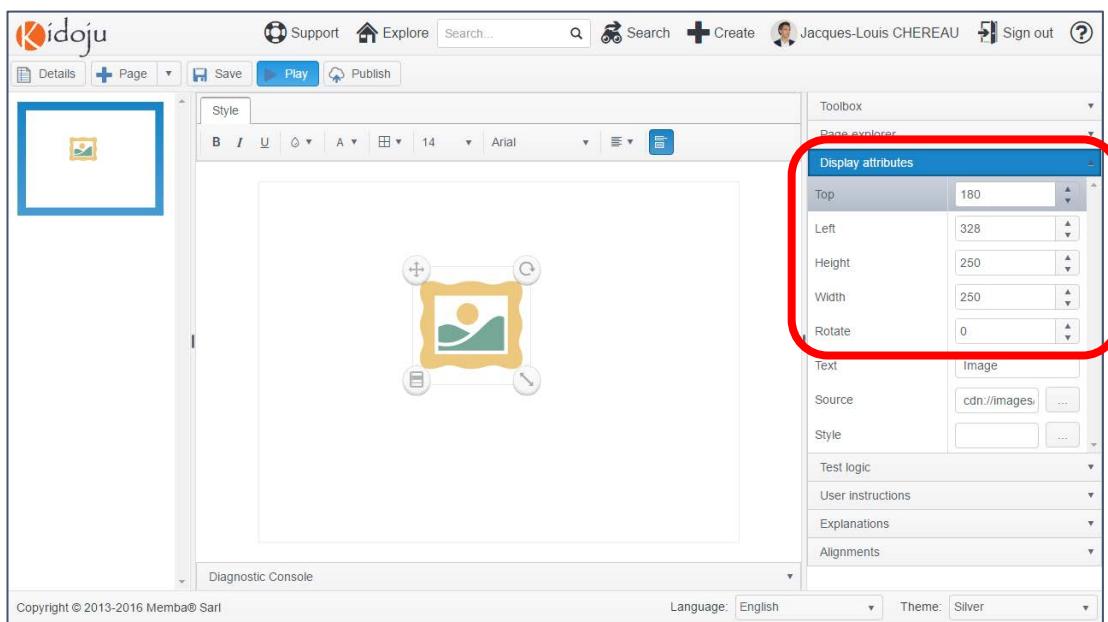
## Moving, rotating, resizing and aligning components

First select the image component on the stage by clicking it, then:

- Drag the move handle to move the component,
- Drag the rotate handle to rotate the component,
- Drag the resize handle to resize the component.

*Note: image resizing is constrained proportionally.*

Alternatively, after selecting the component, expand the **Display attributes** collapsible panel to show the **top**, **left**, **height**, **width** and **rotate** attributes:



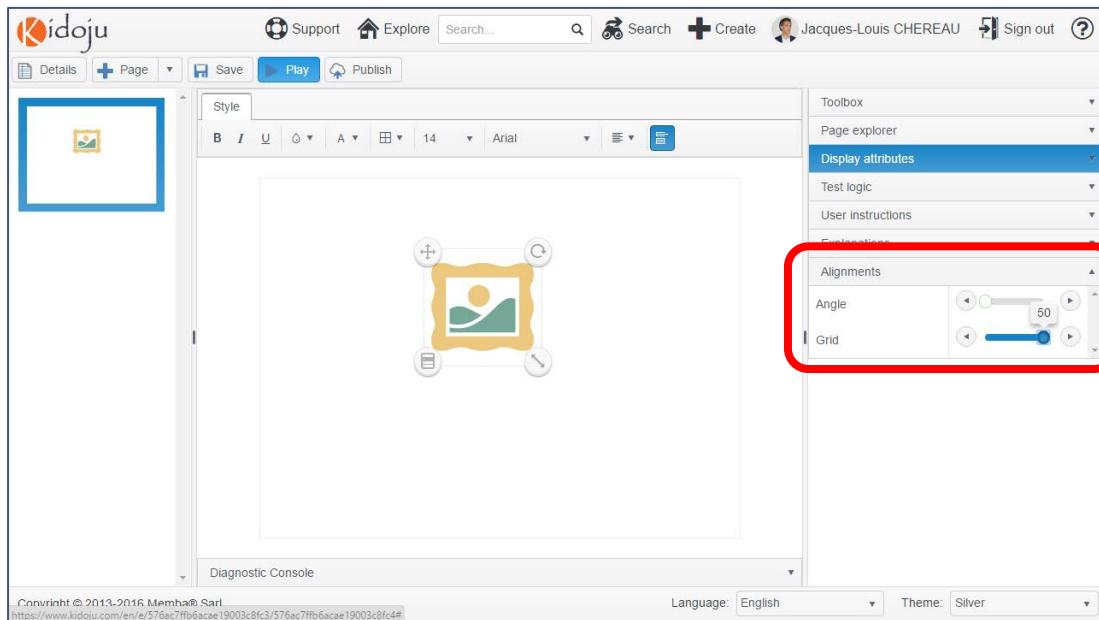
Enter the values you deem appropriate and remember to click the **Save** button often.

*Note: The size of a page is 1024px \* 768px. A px or pixel is a dot on the screen. The point at coordinates (0, 0) is the top left corner. Therefore, the point at coordinates (1024, 768) is the bottom right corner.*

When you need to align components, there is a better option than copying and pasting top and left values across components. Expand the **Alignments** collapsible panel in the tools pane and set the **Grid** slider. This creates what some people call a snap grid.

The value of the **Grid** slider from 0 to 50 sets the step in pixels of acceptable values for positioning (top, left) and resizing (height, width) components, making it much easier to align or distribute evenly components on the stage.

The **Angle** slider, taking values from 0 to 45 degrees, works the same way with rotation.



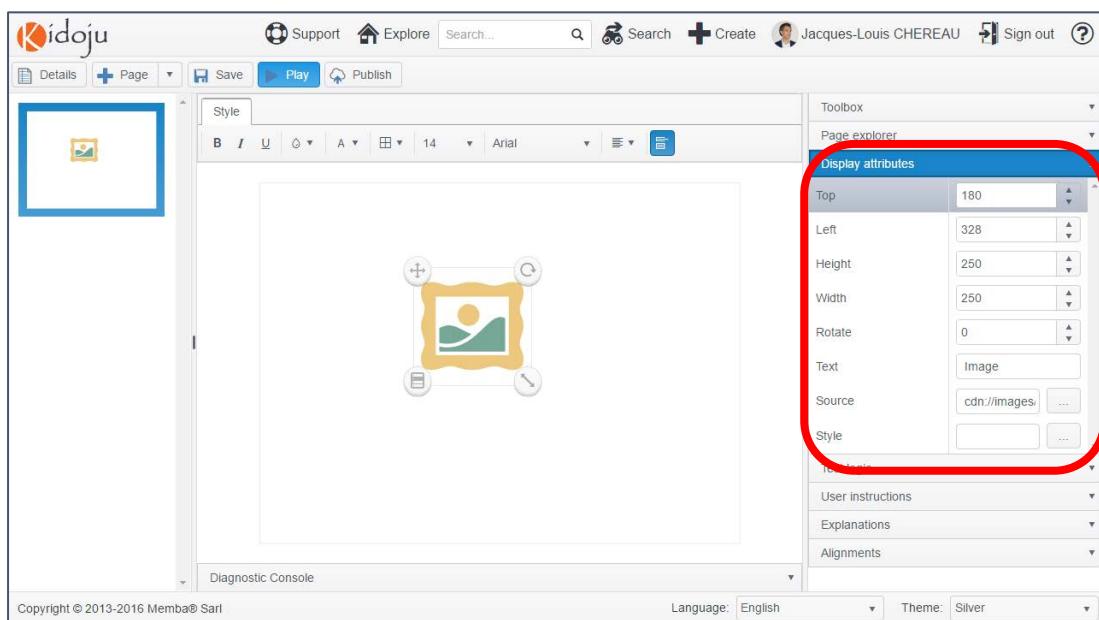
*Note: when resizing components that have test logic, consider the Position of correction ticks and crosses in the Advanced Guide.*

## Display attributes and test logic

We have divided the properties of a component into display attributes which affect the way components are displayed and test logic which affect the way they contribute to the score of a knowledge test.

### Display attributes

Display attributes essentially include position, size and style. Currently all components have display attributes.

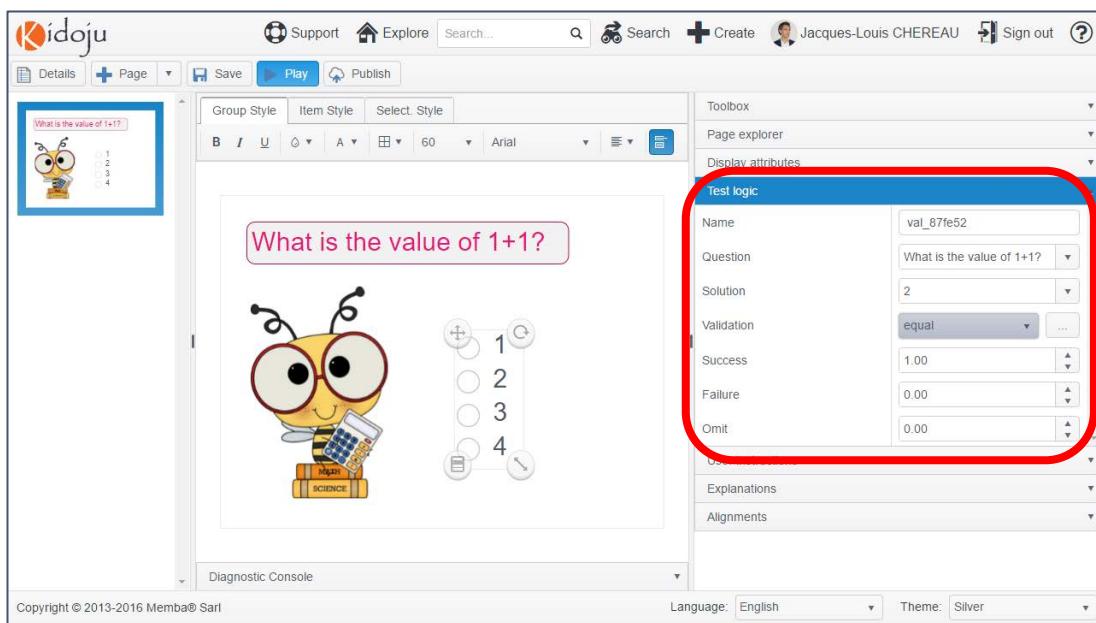


In particular, image, audio and video components designate files which you can upload to our servers. There is currently a limit to the size of uploaded files and you might get an error if the file you are trying to upload is too big. There are good reasons to limit the size of files specially to protect mobile device users consuming knowledge tests on 3G data plans.

*Note: there are many free tools to crop and resize images including Paint on Windows® and the image previewer on macOS®.*

## Test logic

Components which participate in the answer to a question have test logic properties. Test logic generally comprises a question and a solution displayed in the score grid, a validation rule and points to compute the final score.



A validation rule can be a predefined algorithm or a custom function. The most common predefined algorithm is “equal” which compares the answer value with the solution value.

*Note: more on custom functions in the JavaScript custom validations chapter of the Advanced Guide.*

There are points (including negative points) for successfully answering, failing to answer correctly and omitting to answer.

The following screenshot shows how these fields are displayed in the score grid.

The screenshot shows a user interface for Kidoju. At the top, there's a navigation bar with links for Support, Explore, Search, Create, and Sign out. Below the navigation is a toolbar with buttons for Details, Edit, Correction, Score (which is highlighted in blue), and Reset. The main area displays a message: "You have scored 100%" with a gold trophy icon. Below this is a table with one row:

Page	Question	Answer	Solution	Score	Result
1	What is the value of 1+1?	2	2	1	

A tooltip window is open over the 'Result' column, showing statistics: Omit: 0, Failure: 0, Success: 1, Your score: 1.

At the bottom of the screen, there are copyright notices for Memba® Sarl (2013-2016) and language/theme settings for English and Silver.

## Styles

In Kidoju, most components have one or more style properties.

The easy way to modify style properties is to use the formatting toolbar above the stage as in the example below.

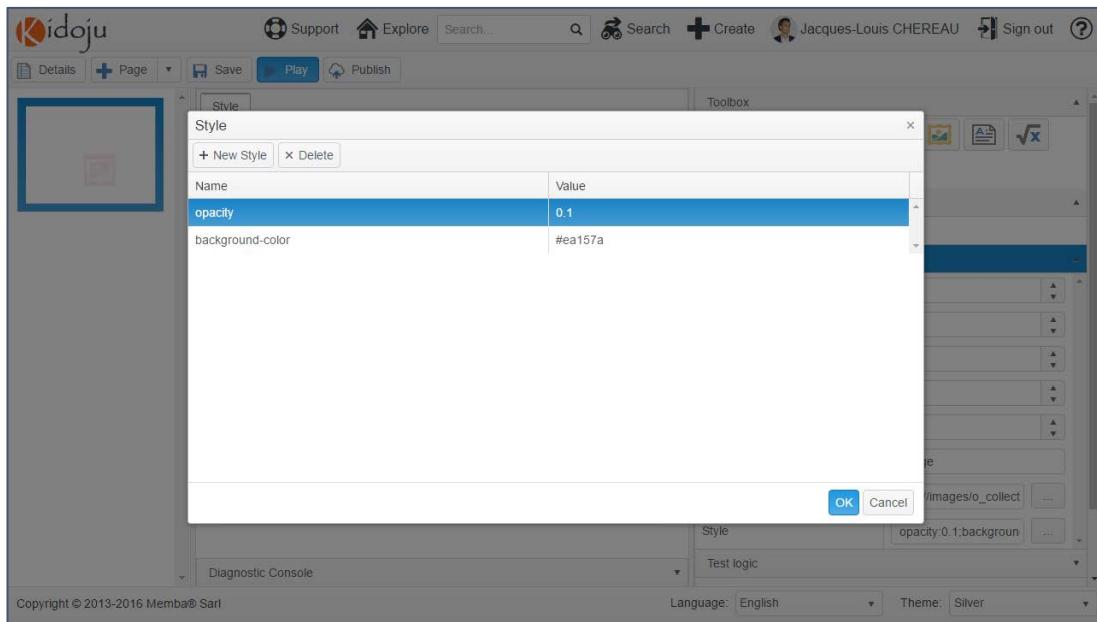
This screenshot shows the Kidoju editor interface. A red box highlights the 'Style' toolbar at the top left, which includes buttons for Bold (B), Italic (I), Underline (U), font size (14), font family (Arial), and a color palette. To the right is a 'Toolbox' panel and a 'Page explorer'. On the stage, there is a component with a yellow frame and a small image inside. The 'Display attributes' panel on the right is expanded, showing style properties for this component:

- Top: 380
- Left: 459
- Height: 250
- Width: 250
- Rotate: 0
- Text: Image
- Source: cdn://images/o\_collectic/
- Style: background-color:#ea1;

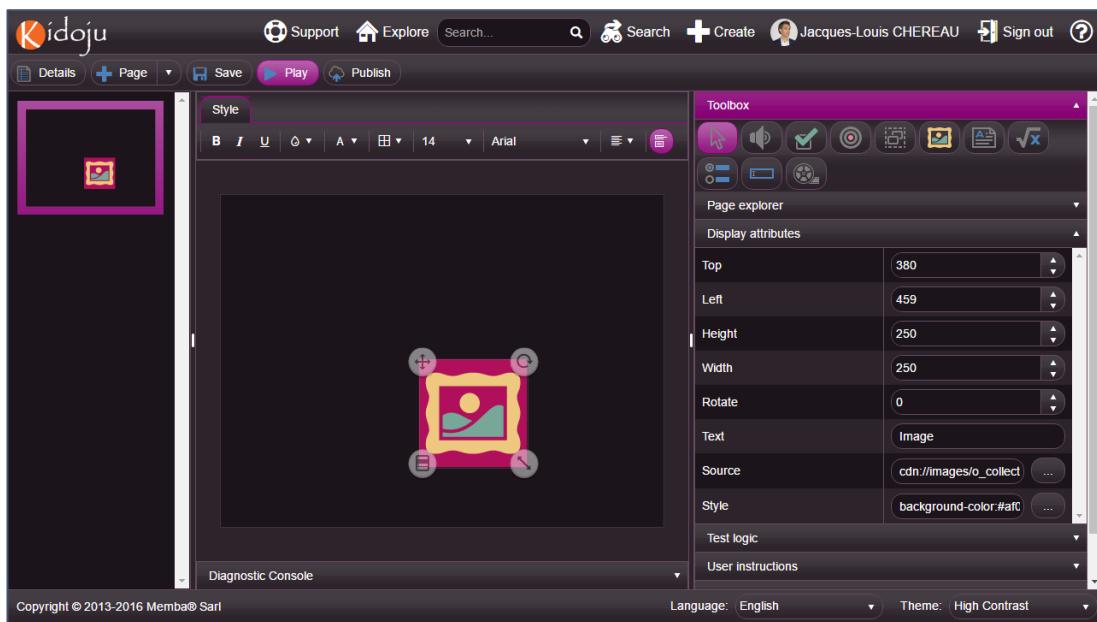
At the bottom, there are copyright notices for Memba® Sarl (2013-2016) and language/theme settings for English and Silver.

The formatting toolbar only gives access to a limited set of style values. For fine-grained control over styles, expand the **Display attributes** collapsible panel and click the [...] button of the **Style** property. Then add or modify any style values.

*Note: styles conform to the Cascading Style Sheet (CSS) specifications.  
More on CSS in the CSS styles chapter of the Advanced Guide.*

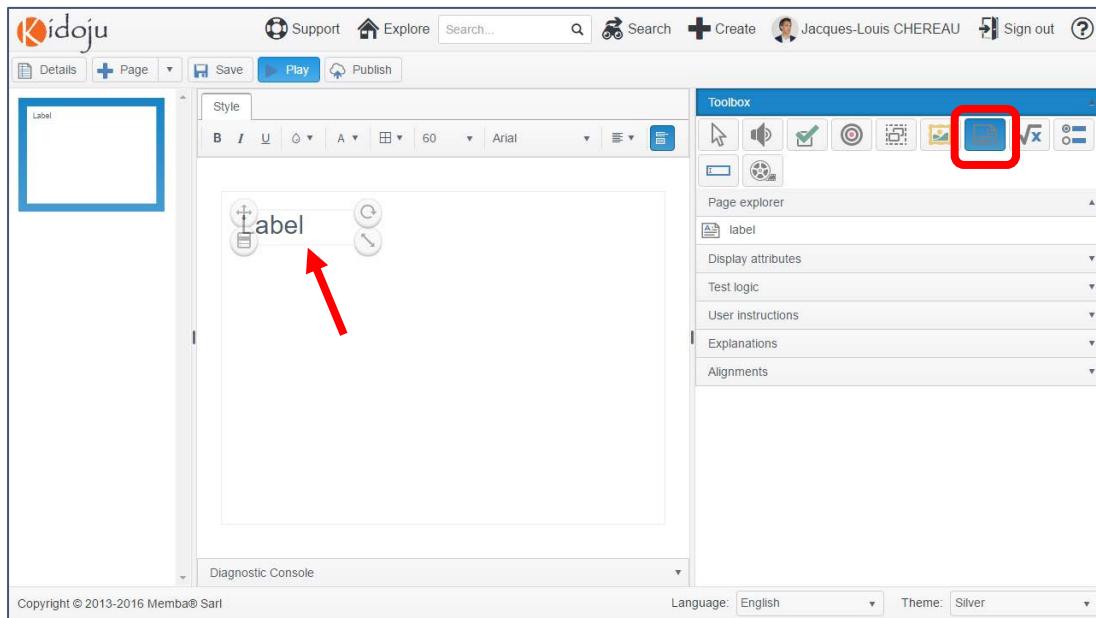


When modifying styles, make sure they display well both with light and dark themes.

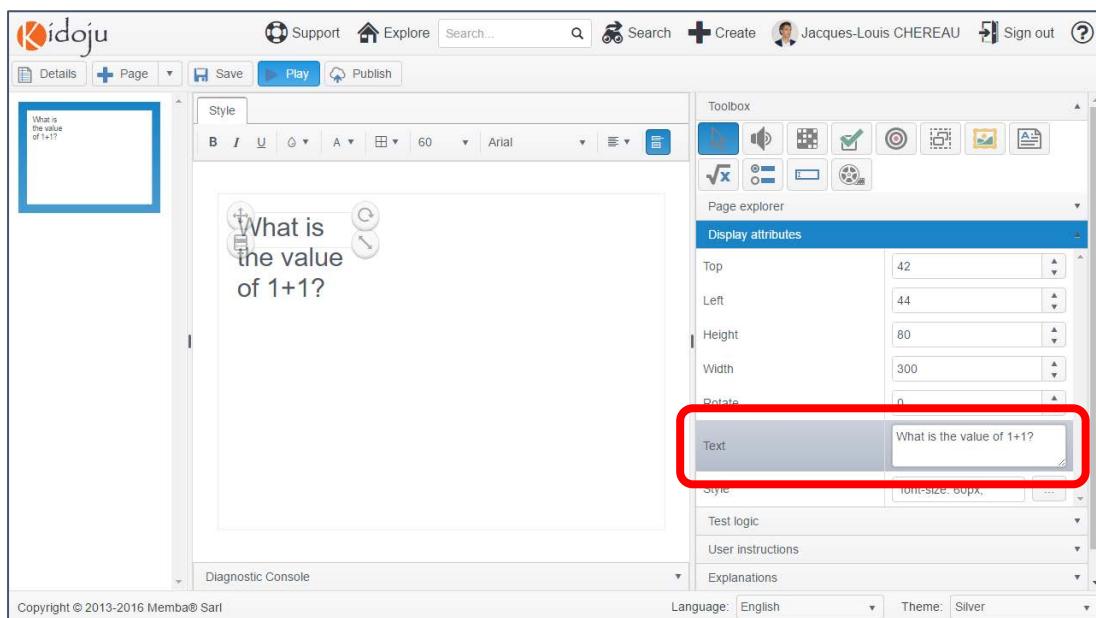


## Labels

Labels are strings of characters displayed with style. To add a label to the stage, select (click) the **Label** tool in the toolbox and click the stage. A new label is added to the page.

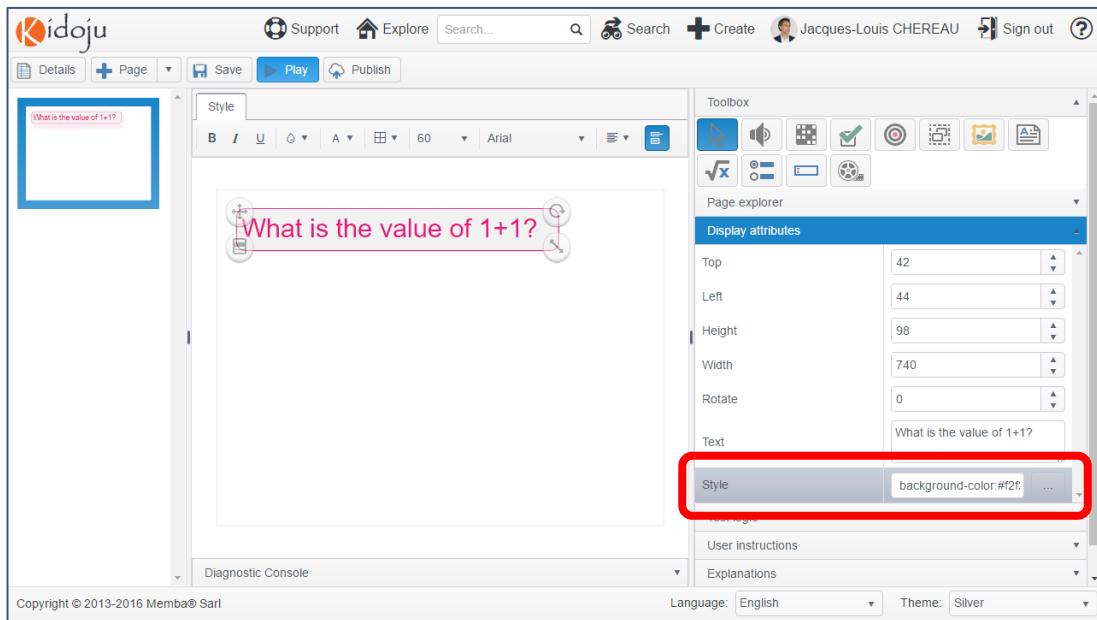


To change the text displayed, expand the **Display attributes** collapsible panel and change the value of the **Text** property.

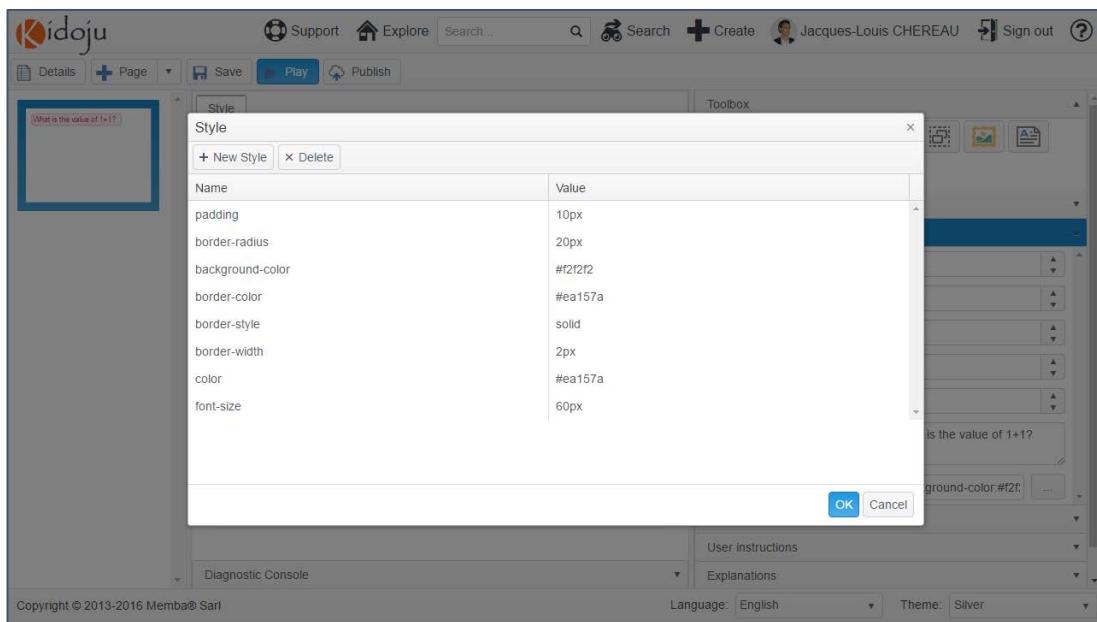


Position and resize the label as explained in the *Moving, rotating, resizing and aligning components* chapter.

By default, labels have a font size of 60px. Modify styles as explained in the *Styles* chapter to obtain the label on the following screenshot after resizing and styling.

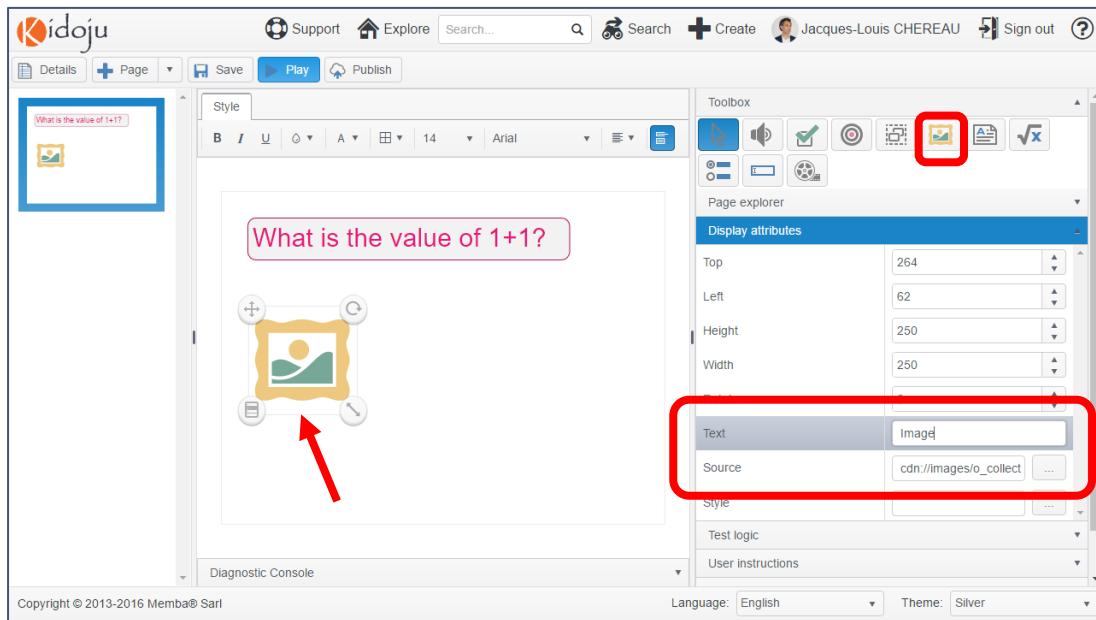


Please check here below the corresponding style attributes:



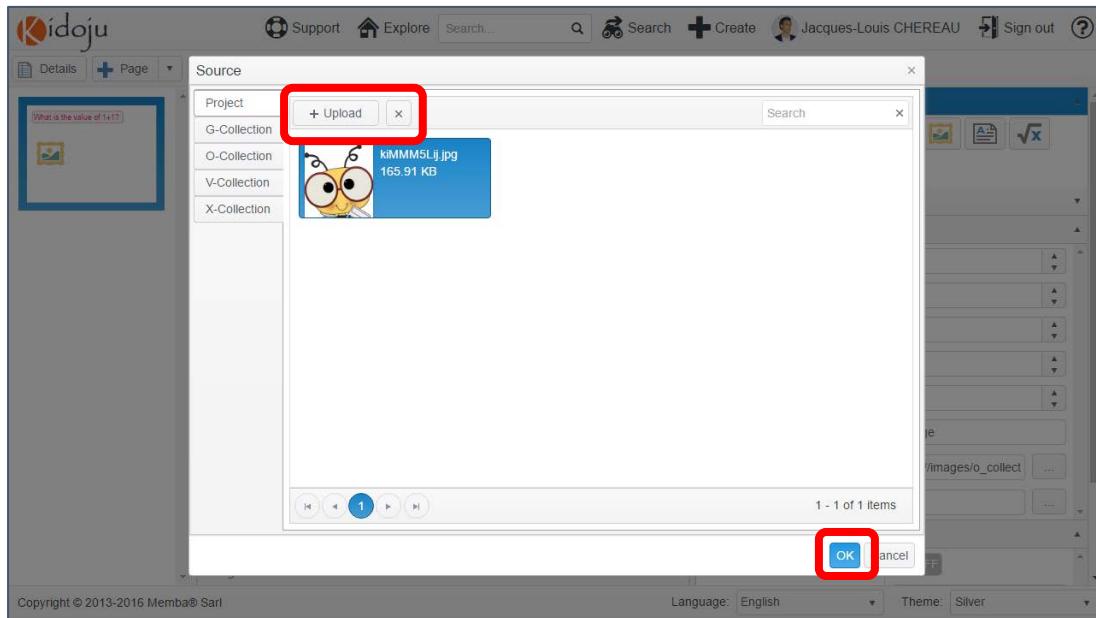
## Images

Images show the content of gif, jpeg, png and svg files on stage. To add an image to the stage, select (click) the **Image** tool in the toolbox and click the stage. A new image is added to the page.



Prepare an image of your choice. We suggest <http://cliparts.co/clipart/223399> which you can download before uploading it to Kidoju.

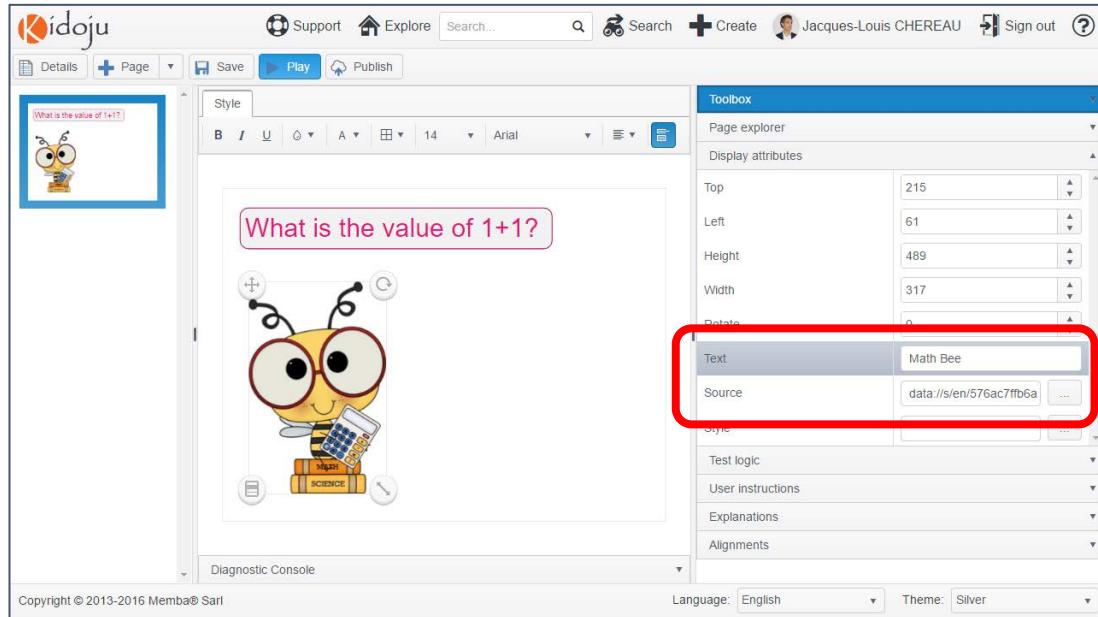
Select the **Source** property in the **Display attributes** collapsible panel of the tools pane and click the [...] button. Click the **Upload** button, select your file on your hard drive and click the **Open** button.



*Note: The tabs on the left give access to image collections which have already been uploaded for your perusal.*

*Note: Considering mobile devices on 3G/4G plans, we limit the size of images you can upload to 400 Kb. Any larger file would trigger an error.*

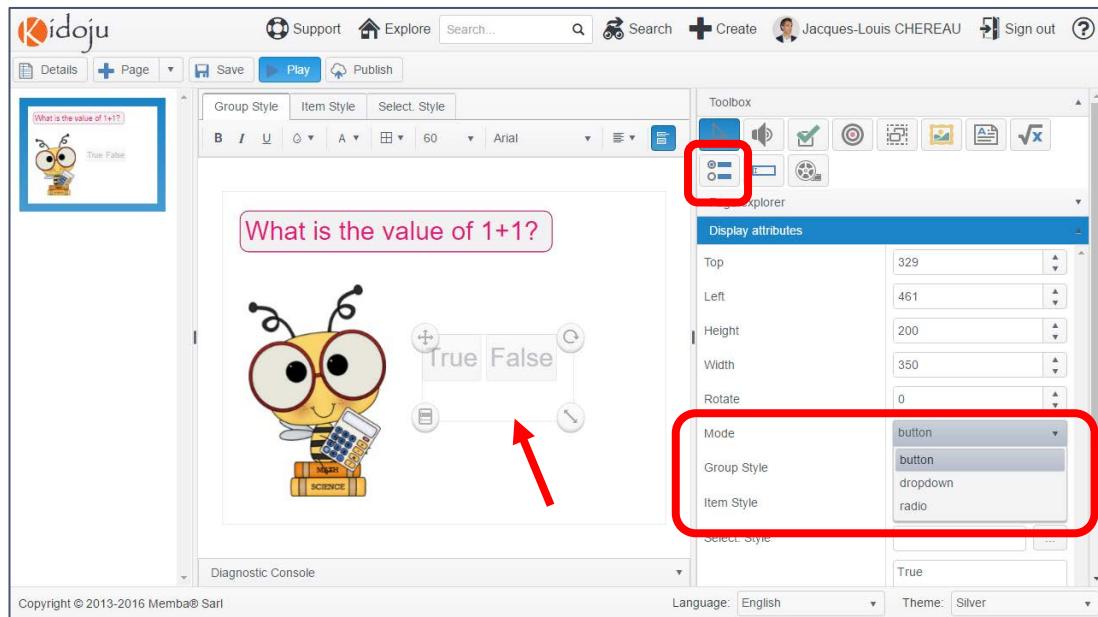
When your image is displayed in the **Source** dialog as above, it has been uploaded onto our servers. Click **OK** to assign this file to the image source. Resize the image component on the stage and consider filling the alternate **Text** property in the display attributes especially for blind people.



## Quizzes (or multiple choice questions)

The typical quiz is a multiple choice question which can be displayed as a drop down list, a set of radio buttons or a set of toggle buttons.

To add a quiz to the stage, select (click) the **Quiz** tool in the toolbox and click the stage. A new quiz is added to the page as True & False buttons.



Select the **Mode** property in the **Display attributes** collapsible panel of the tools pane and choose the radio mode.

Then enter all possible values in the **Values** property. Make sure you type each value on a separate line with a carriage return as represented hereafter.

Resize the component bearing in mind the chapter about *Position of correction ticks and crosses* in the *Advanced Guide*.

The screenshot shows the Kidoju editor interface. On the left, there's a preview window with a cartoon bee character holding a calculator and asking "What is the value of 1+1?". Below it is a toolbar with buttons for Details, Page, Save, Play, and Publish. The main workspace contains the question text and the bee character. To the right is a vertical tools pane. Under the 'Display attributes' section, the 'Mode' dropdown is set to 'radio'. The 'Values' property is expanded, showing four lines of text: '1', '2', '3', and '4', each on a new line. A red box highlights this 'Values' section. At the bottom of the tools pane, there are language and theme selection dropdowns.

Select the **Question** property in the **Test logic** collapsible panel of the tools pane and choose the text of the label displayed on the page.

This screenshot shows the same Kidoju editor setup as the previous one, but with the 'Test logic' panel open instead. The 'Question' property is set to '1'. The 'Solution' property is highlighted with a red box and contains the text 'What is the value of 1+1?'. The rest of the interface is identical to the first screenshot, including the preview window, toolbar, and tools pane.

Select the **Solution** property and choose “2”.

The screenshot shows the Kidoju editor interface. On the left, there's a preview window with a cartoon bee character and a question box. On the right, the 'Test logic' panel is open, containing fields for Name, Question, Solution, Validation, Success, Failure, Omit, User instructions, Explanations, and Alignments. A red box highlights the 'Solution' dropdown which lists '1', '2', '3', and '4'. The 'Validation' field also contains '1'.

**Note:** when you modify possible values to choose from, make sure you update the solution.

Keep default values for the **Validation** rule and the **Success**, **Failure** and **Omit** marks.

**Note:** do not forget to save your work often.

After clicking the **Save** button, **Play** your first Kidoju.

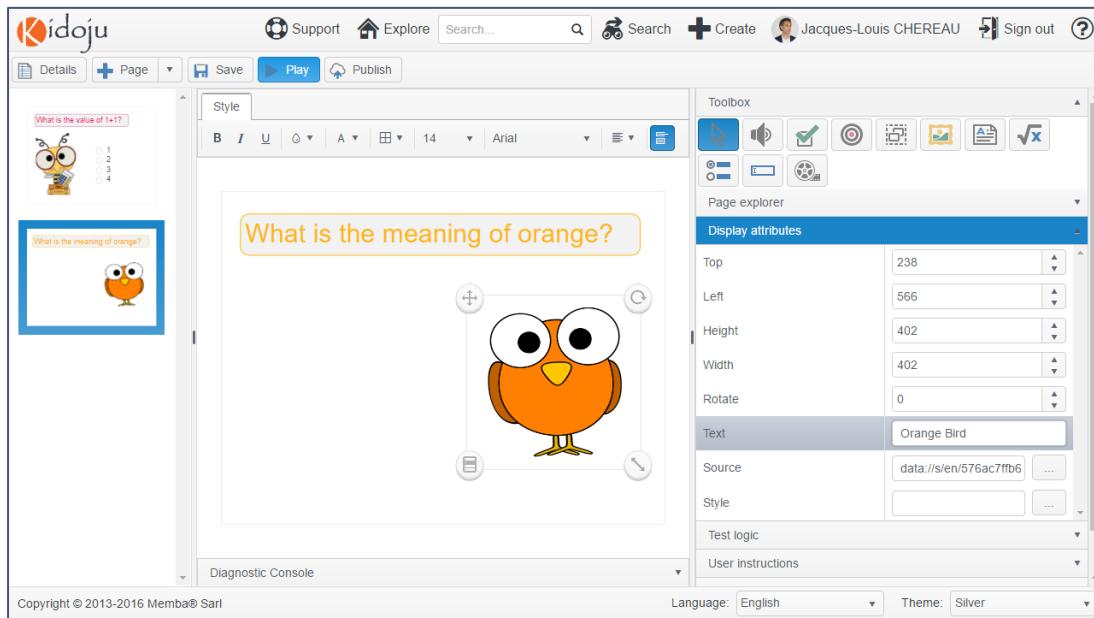
The screenshot shows the Kidoju player interface. It displays a trophy icon and the message 'You have scored 100%'. Below this is a table with columns: Page, Question, Answer, Solution, Score, and Result. The first row shows '1', 'What is the value of 1+1?', '2', '2', '1', and a green checkmark. To the right of the table is a summary box with the text: 'Omit: 0', 'Failure: 0', 'Success: 1', and 'Your score: 1'. The 'Edit' button in the top navigation bar is highlighted with a red box.

Click the **Edit** button to return to the *Editor*.

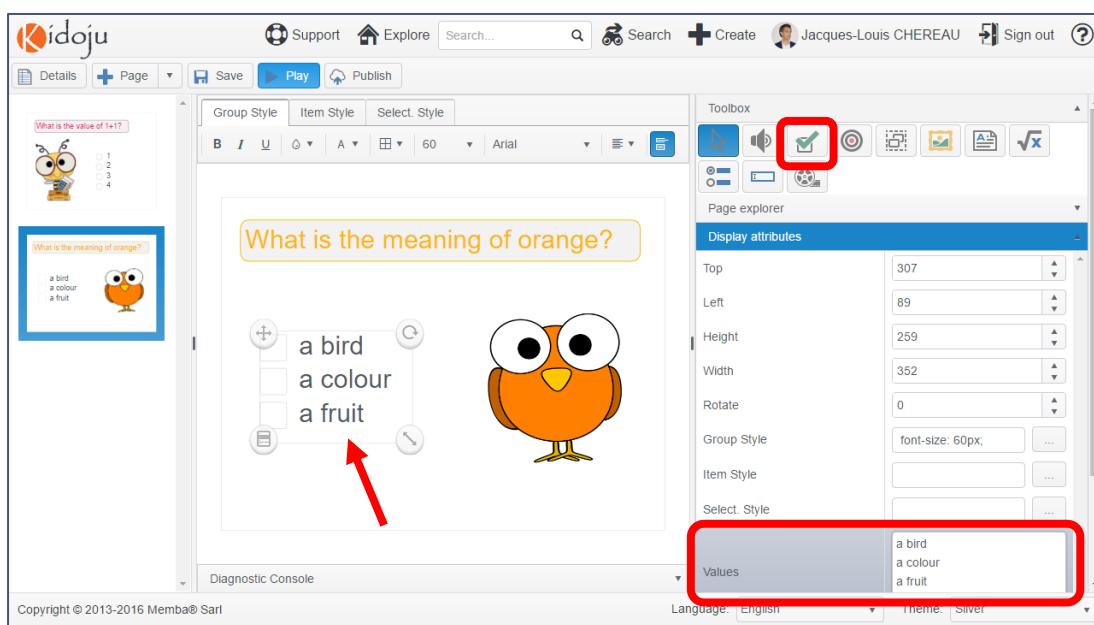
## Checkboxes

Checkboxes are multiples choice questions with cumulative choices: the correct answer is constituted of several choices.

Add a second page as explained in the *Adding, removing, duplicating and sorting pages* chapter. Add a label as explained in the *Labels* chapter. Possibly add an image as explained in the *Images* chapter using <http://cliparts.co/clipart/37218>. Try to complete the following screenshot.



To add checkboxes to the stage, select (click) the **Checkboxes** tool in the toolbox and click the stage. A new set of checkboxes is added to the page.



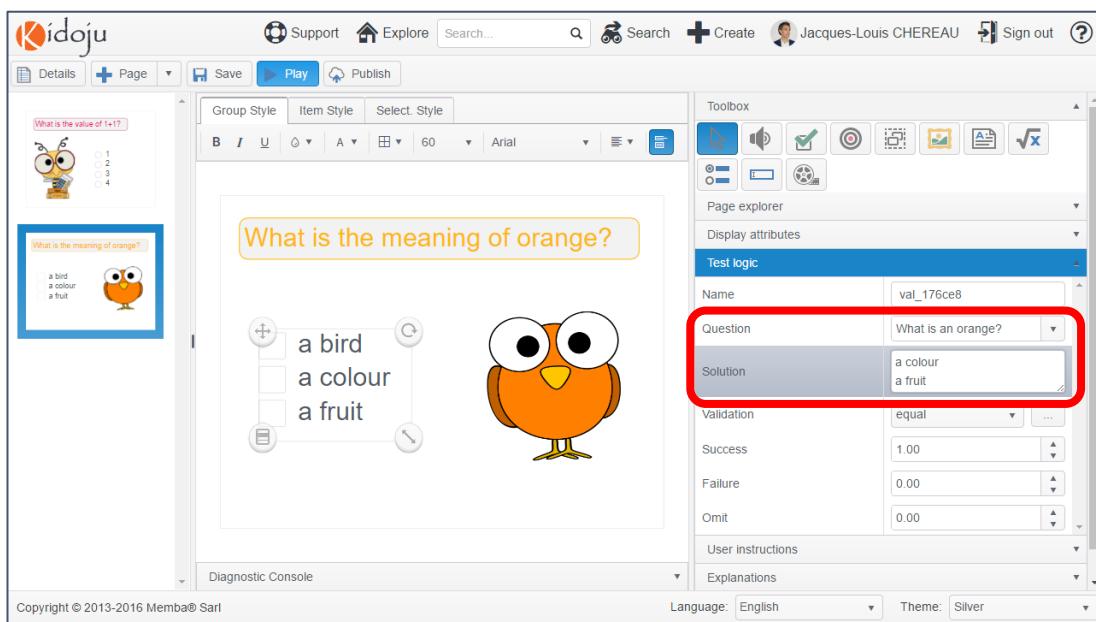
Then enter all possible values in the **Values** property of the **Display attributes** collapsible panel of the tools pane. Make sure you type each value on a separate line with a carriage return as represented hereafter.

Resize the component bearing in mind the preceding chapter about *Position of correction ticks and crosses*.

Select the **Question** property in the **Test logic** collapsible panel of the tools pane and choose the text of the label displayed on the page.

Select the **Solution** property and enter “a colour” and “a fruit” on two lines.

*Note: when you modify values, make sure you update the solution.*



Keep default values for the **Validation** rule and the **Success**, **Failure** and **Omit** points.

*Note: do not forget to save your work often.*

After clicking the **Save** button, **Play** your Kidoju.

You have scored 100%

Page	Question	Answer	Solution	Score	Result
1	What is the value of 1+1?	2	2	1	
2	What is an orange?	a color a fruit	a color a fruit	1	

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Click the **Edit** button to return to the *Editor*.

## Textboxes

Textboxes are areas for typing text and provide short answers.

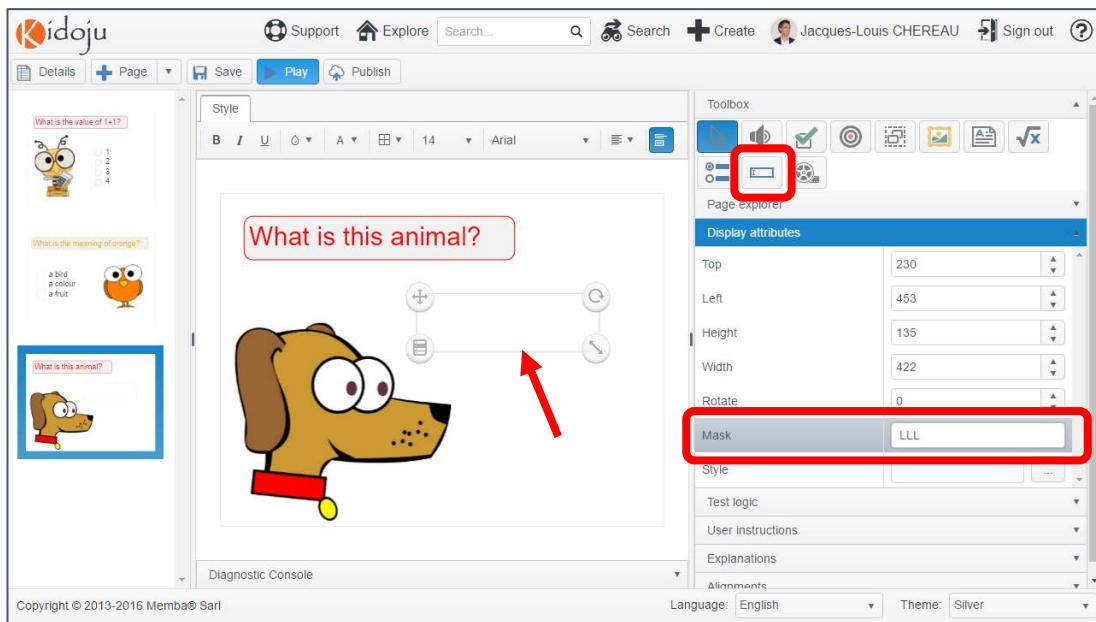
Add a third page as explained in the *Adding, removing, duplicating and sorting pages* chapter. Add a label as explained in the *Labels* chapter. Possibly add an image as explained in the *Images* chapter using <http://cliparts.co/clipart/1615>. Try to complete the following screenshot.

What is this animal?

Cartoon Animal

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To add a textbox to the stage, select (click) the **Textbox** tool in the toolbox and click the stage. A new textbox is added to the page.



Then type “LLL” in the **Mask** property of the **Display attributes** collapsible panel of the tools pane. A mask of “LLL” constrains the answer to 3 letters and all other characters (digits and symbols) are discarded. Consider the mask as an optional hint.

A mask determines allowed characters and is made of the following rules:

0	Digit	Accepts any digit between 0 and 9.
9	Digit or space	Accepts any digit between 0 and 9, plus space.
#	Digit or space	Like 9 rule, but allows also (+) and (-) signs.
L	Letter	Restricts input to letters a-z and A-Z. This rule is equivalent to [a-zA-Z] in regular expressions.
?	Letter or space	Restricts input to letters a-z and A-Z and to spaces. This rule is equivalent to [a-zA-Z ] in regular expressions.
&	Character	Accepts any character. The rule is equivalent to \S in regular expressions.
C	Character or space	Accepts any character. The rule is equivalent to . (dot) in regular expressions.
A	Alphanumeric	Accepts letters and digits only.
a	Alphanumeric or space	Accepts letters, digits and space only.
.	Decimal placeholder	The decimal separator will be get from the current culture.
,	Thousands placeholder	The display character will be get from the current culture.

You might find the following examples useful

Mask	Accepts	Rejects
------	---------	---------

LLL	Abc	123 Abcd #*\$%
LL?LL	Ab cd abcde	123 Abcd #*\$%
LL LL	Ab cd	123 Abcd #*\$%
0000	1234	123 Abcd #*\$%
00-00	12-34	12-3 Ab-cd ££-\$\\$

Resize the component bearing in mind the preceding chapter about *Position of correction ticks and crosses*.

Select the text of the label displayed on the page for the **Question** property in the **Test logic** collapsible panel of the tools pane.

Type “dog” in the **Solution** property.

Select “ignoreCaseEqual” for the **Validation** property. This validation algorithm ignores case and accepts “DOG”, “dog” and even “DoG” as correct answers.

The screenshot shows the Kidoju editor interface. On the left, there are several cards with questions like "What is the value of 14!?", "What is the meaning of orange?", and "What is this animal?". The main area displays a card with a cartoon dog and the question "What is this animal?". The right side of the screen shows the "Test logic" panel. A red box highlights the "Validation" section, which is set to "ignoreCaseEqual". Other settings in the panel include "Name: val\_84bc77", "Question: What is this animal?", and "Solution: dog".

Textboxes provide the following validation algorithms:

equal	Strict comparison: résumé = résumé.
ignoreCaseEqual	Comparison ignoring case: RéSuMé = résumé.
ignoreCaseMatch	See the chapter about <i>Regular Expressions</i> in the <i>Advanced Guide</i> .

ignoreDiacriticsEqual	Comparison ignoring case and diacritics: rEsUmE = résumé.
match	See the chapter about <i>Regular Expressions</i> in the <i>Advanced Guide</i> .
metaphone	Phonetic comparison based on the metaphone algorithm: RAISUMER = résumé.
soundex	Phonetic comparison based on the soundex algorithm: RAISUMER = résumé.

*Note: more information on metaphone and soundex can be found at [https://en.wikipedia.org/wiki/Phonetic\\_algorithm](https://en.wikipedia.org/wiki/Phonetic_algorithm). These algorithms work best in English and soundex is more permissive than metaphone.*

Keep default values for the **Success**, **Failure** and **Omit** points.

*Note: do not forget to save your work often.*

After clicking the **Save** button, **Play** your Kidoju.

The screenshot shows the Kidoju Scoreboard page. At the top, there's a navigation bar with links for Support, Explore, Search, Create, and Sign out. Below the navigation is a message: "You have scored 100%" with a trophy icon. Underneath is a table showing three questions and their results:

Page	Question	Answer	Solution	Score	Result
1	What is the value of 1+1?	2	2	1	✓
2	What is an orange?	a color a fruit	a color a fruit	1	✓
3	What is this animal?	dog	dog	1	✓

At the bottom of the page, there are copyright and language/theme settings.

Click the **Edit** button to return to the *Editor*.

## Connectors

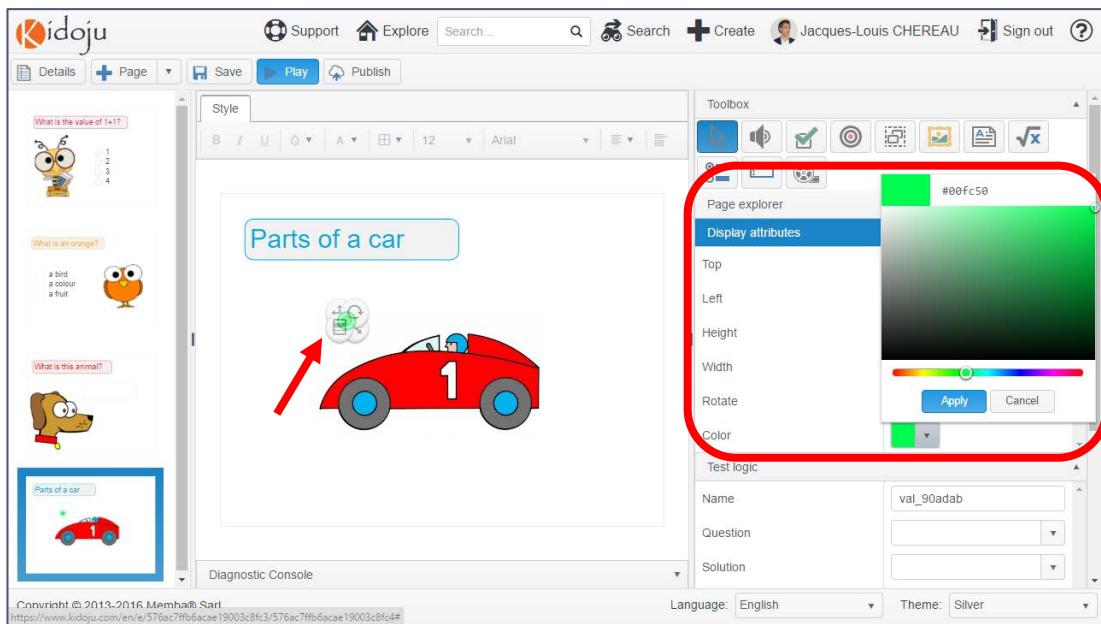
Connectors are used to draw connections especially between images and legends.

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Add a fourth page as explained in the *Adding, removing, duplicating and sorting pages* chapter. Add a label as explained in the *Labels* chapter. Add an image as explained in the *Images* chapter using <http://cliparts.co/clipart/17129>. Try to complete the following screenshot.

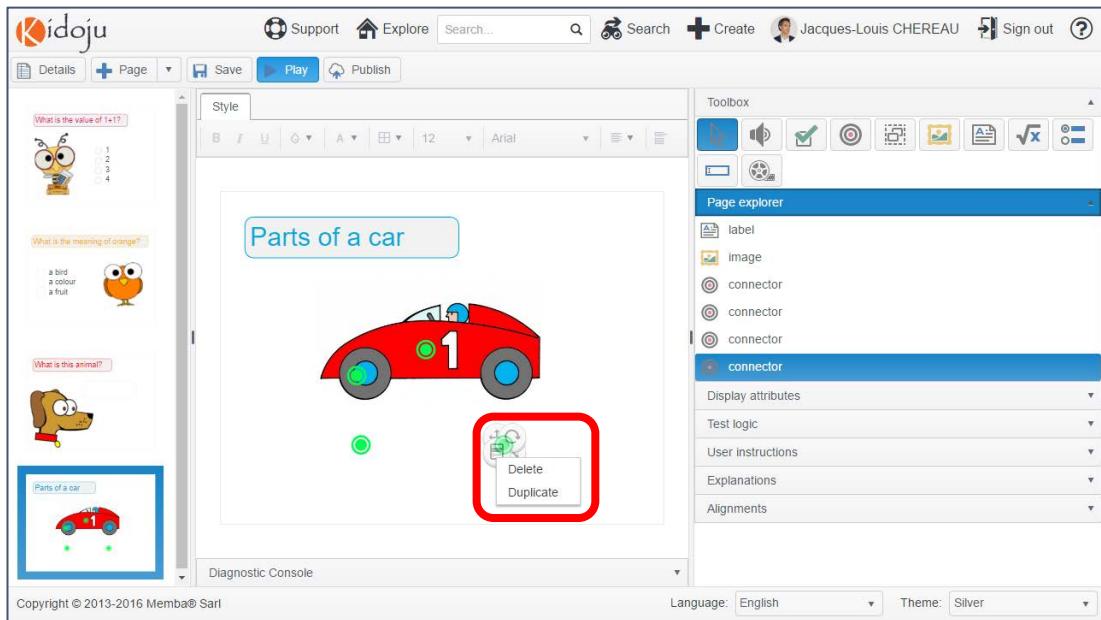
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To add a connector to the stage, select (click) the **Connector** tool in the toolbox and click the stage. A new connector is added to the page.



Select a contrasted colour in the **Colour** property of the **Display attributes** collapsible panel of the tools pane. Make sure this colour fits with light and dark themes.

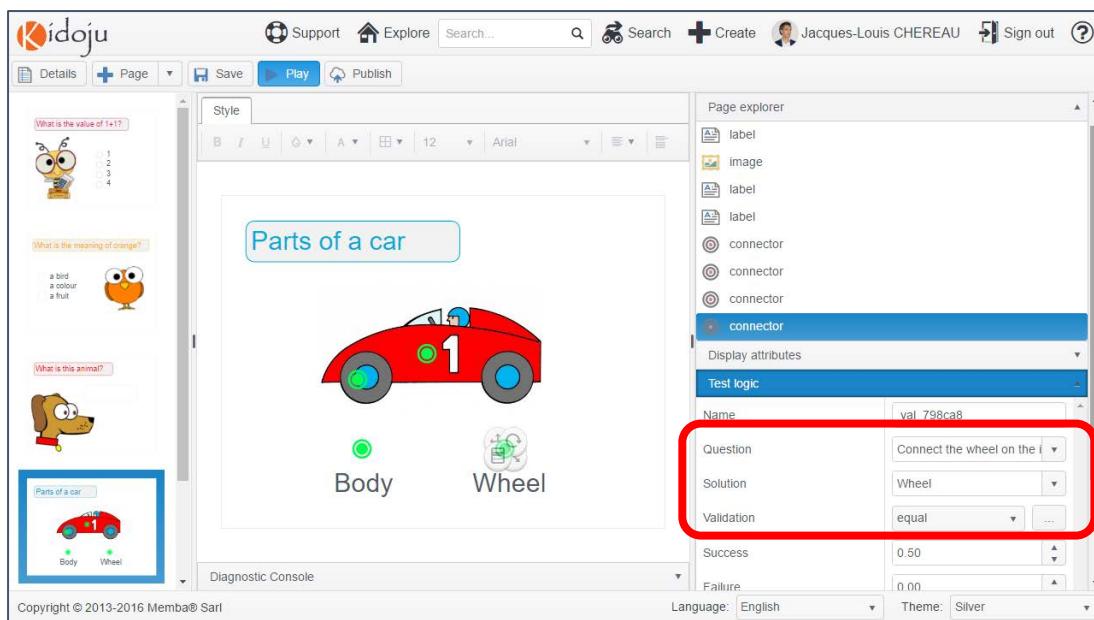
Click the menu handle and the **Duplicate** command to create 4 connectors and position them as represented below:



Fill the test logic of all four connectors as follows:

	Question	Solution	Validation
#1	Connect the wheel on the image with the wheel label?	Wheel	equal

#2	Connect the wheel on the image to the wheel label?	Wheel	equal
#3	Connect the body on the image to the body label?	Body	equal
#4	Connect the body on the image to the body label?	Body	equal



Keep default values for the **Success**, **Failure** and **Omit** points.

Add two labels respectively for “Body” and “Wheel” and position them as above.

**IMPORTANT!** Sort your connectors in the page explorer so that they are all listed at the bottom. The reason is you want connections to be displayed on top of images and labels.

*Note: do not forget to save your work often.*

After clicking the **Save** button, **Play** your Kidoju.

You have scored 100%

Page	Question	Answer	Solution	Score	Result
1	What is the value of 1+1?	2	2	1	
2	What is an orange?	a color a fruit	a color a fruit	1	
3	What is this animal?	dog	dog	1	
4	Connect the body on the image to the body label?	Body	Body	1	
4	Connect the wheel on the image with the wheel label?	Wheel	Wheel	1	

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Click the **Edit** button to return to the *Editor*.

## Drop zones

Drop zones provide a surface to drop images and/or labels and validate their value.

Drop 2 fishes into the fish bowl

Please drop here.

Instructions

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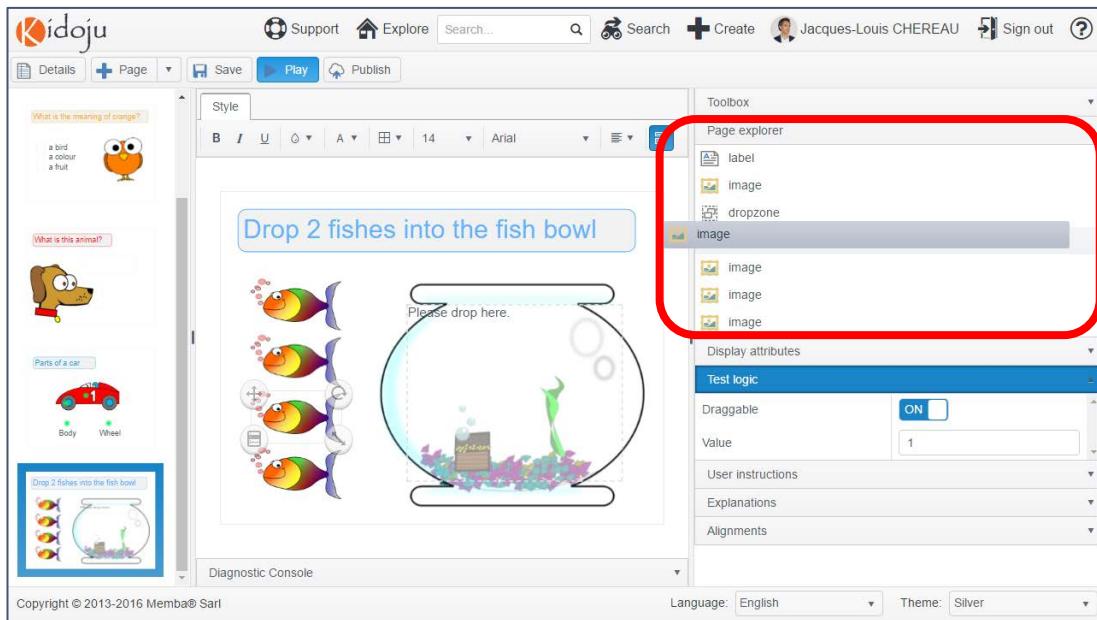
Add a fifth page as explained in the *Adding, removing, duplicating and sorting pages* chapter. Add a label as explained in the *Labels* chapter. Add two image as explained in the *Images* chapter using <http://cliparts.co/clipart/23725> and <http://cliparts.co/clipart/3120348>. Try to complete the following screenshot.

The screenshot shows the Kidoju editor interface. On the left, there are several activity cards: 'What is the value of 1+1?', 'What is the meaning of orange?', 'What is this animal?', and 'Parts of a car'. The main workspace contains a math activity titled 'Drop 2 fishes into the fish bowl'. A single fish icon is selected, highlighted with a red box, with a context menu open showing 'Delete' and 'Duplicate' options. To the right, the toolbox contains various tools like text, shapes, and media. The 'Display attributes' panel is open, showing sections for 'Test logic', 'User instructions', 'Explanations', and 'Alignments'. At the bottom, the diagnostic console and language/theme settings are visible.

Duplicate the fish images by clicking the menu handle and selecting the **Duplicate** option as shown above. Then define the test logic on each fish by turning draggable on and assigning a value of 1. The drop zone will ensure that the user will have dropped  $1 + 1 = 2$ .

The screenshot shows the Kidoju editor after duplicating the fish images. There are four fish icons on the stage. The 'Test logic' panel on the right is highlighted with a red box, showing the 'Draggable' setting is turned 'ON' and the 'Value' is set to 1. The rest of the interface remains the same, with the toolbox, display attributes panel, and diagnostic console visible.

To add a drop zone to the stage, select (click) the **Drop Zone** tool in the toolbox and click the stage. A new drop zone is added to the page with a dashed border and a "Please drop here" invitation which you can change.



**IMPORTANT!** Sort your drop zone and draggable images and labels in the page explorer so that all draggable images are listed at the bottom, just after the drop zone. The reason is you want draggable images on top of everything else.

Select the text of the label displayed on the page for the **Question** property in the **Test logic** collapsible panel of the tools pane.

Type “2” in the **Solution** property.

Select “sumEqual” for the **Validation** property.

Textboxes provide the following validation algorithms:

equal	Strict comparison: résumé = résumé.
sumEqual	Comparison ignoring case: RéSuMé = résumé.

*Note: more information on metaphone and soundex can be found at [https://en.wikipedia.org/wiki/Phonetic\\_algorithm](https://en.wikipedia.org/wiki/Phonetic_algorithm). These algorithms work best in English and soundex is more permissive than metaphone.*

The screenshot shows the Kidoju editor interface. On the left, there's a sidebar with several questions: "What is the meaning of orange?", "What is this animal?", "Parts of a car", and a "Drop 2 fishes into the fish bowl" interaction. The main area displays the "Drop 2 fishes into the fish bowl" interaction, which shows four colorful fish swimming around a fish bowl. A callout bubble says "Please drop here." The right side features a "Toolbox" with various icons, a "Page explorer", and a "Test logic" panel. The "Test logic" panel is highlighted with a red box and contains fields for "Name" (val\_03cfa6), "Question" (Drop 2 fishes into the fish bowl), "Solution" (2), and "Validation" (sumEqual). Below these, "Success", "Failure", and "Omit" points are set to 1.00, 0.00, and 0.00 respectively.

Keep default values for the **Success**, **Failure** and **Omit** points.

**Note:** do not forget to save your work often.

After clicking the **Save** button, **Play** your Kidoju.

The screenshot shows the Kidoju player interface after saving the test. At the top, there's a message "You have scored 100%" with a trophy icon. Below it is a table summarizing the test results across five pages:

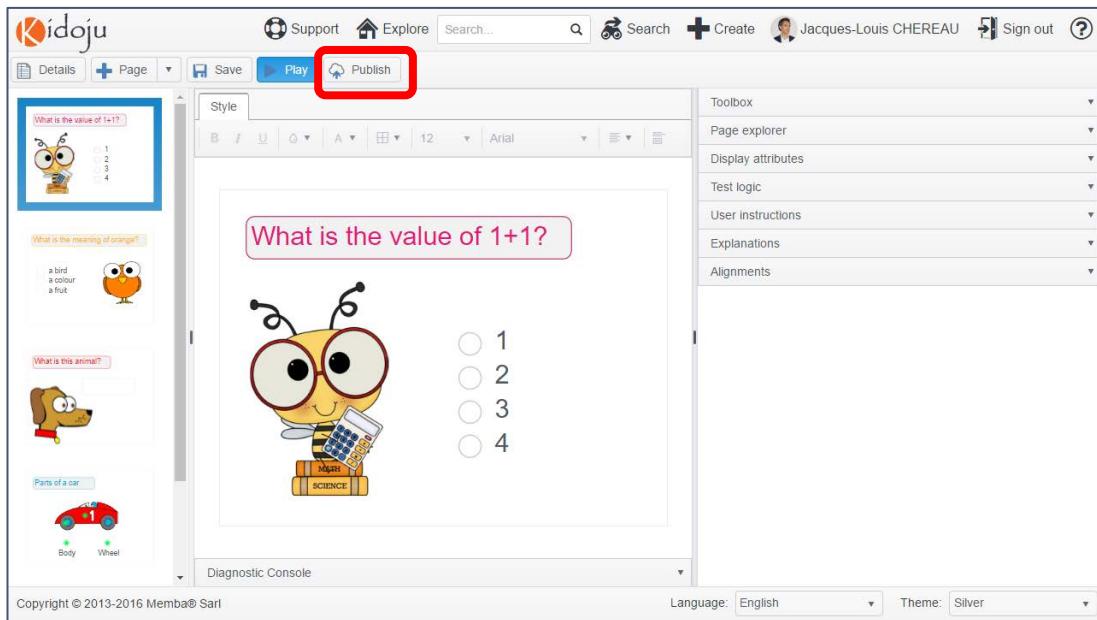
Page	Question	Answer	Solution	Score	Result
1	What is the value of 1+1?	2	2	1	✓
2	What is the meaning of orange?	a colour a fruit	a colour a fruit	1	✓
3	What is this animal?	dog	dog	1	✓
4	Connect the body on the image to the body label?	Body	Body	1	✓
4	Connect the body on the image to the body label?	Wheel	Wheel	1	✓
5	Drop 2 fishes into the fish bowl	1 1	2	1	✓

At the bottom, it says "Copyright © 2013-2016 Memba® Sarl" and "Language: English Theme: Silver".

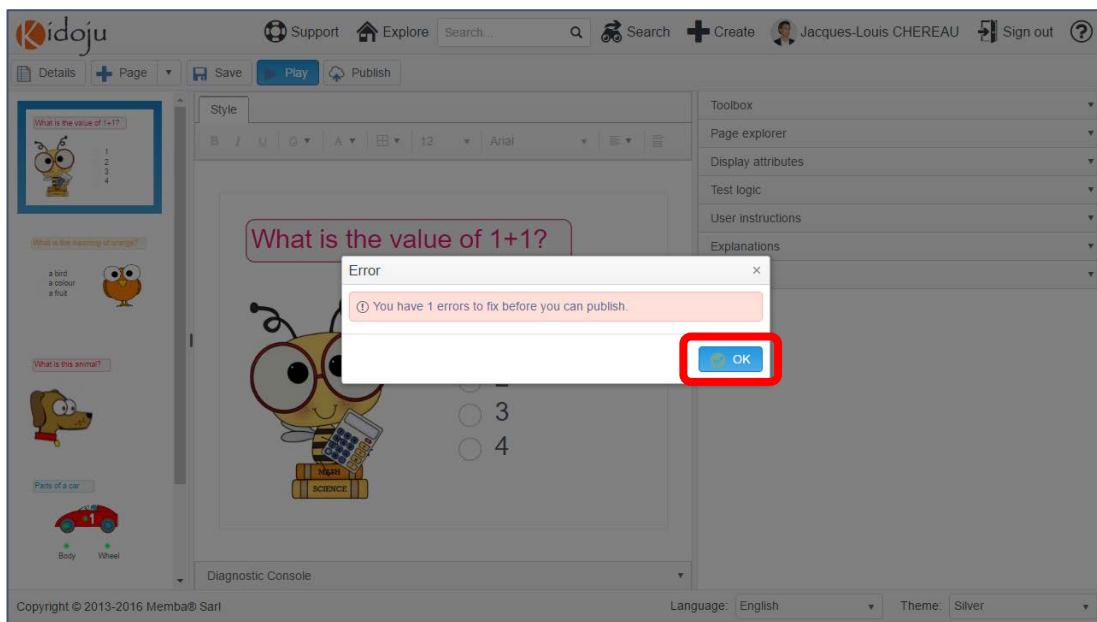
Click the **Edit** button to return to the *Editor*.

## Diagnostics and publication

Now, let us suppose your test is ready for publishing. Click the **Publish** button.



Assuming you have followed the instructions in this User Guide, you should get the following error message:



Discarding the error message by clicking the **OK** button reveals the Diagnostic Console with warnings and errors.

The screenshot shows the Kidoju software interface. On the left, there are several activity cards: "What is the value of 1+1?", "What is the meaning of orange?", "What is this animal?", and "Parts of a car". The central area contains a text input field with the question "What is the value of 1+1?". A red box highlights the "Diagnostic Console" window on the right, which displays a list of 10 recommendations, each preceded by a small blue info icon. At the bottom of this list, a single error message is shown in a larger font: "At least 10 questions are required to be allowed to publish." The status bar at the bottom indicates "Copyright © 2013-2016 Memba® Sarl", "Language: English", and "Theme: Silver".

In this instance, you have 10 warnings and 1 error. Warnings (in yellow) are recommendations which do not prevent from publishing. Errors need to be fixed before publishing.

Amongst warnings, the software recommends adding *User instructions* and *explanations* on all pages. Simply click a warning in the Diagnostic Console to navigate to the corresponding page and make the required correction.

There should only be one error: “At least 10 questions are required to be allowed to publish”. Each component has a weight:

- *Labels* and *Images* have a weight of 0: they do not make questions;
- *Quizzes (or multiple choice questions)*, *Checkboxes* and *Textboxes* have a weight of 1, as each of them make a question;
- *Connectors* have a weight of 0.25, as we consider you need at least 4 connectors to make a question;
- *Character Grids* have a weight of 10, as any grid would require several cells to fill, constituting several questions.

In order to prevent the publication of unfinished user trials, we require that Kidoju quizzes you publish have at least 10 questions, i.e. that the sum of all weights from all page components is at least 10.

*Note: “with great power comes great responsibility”. Please be responsible and only publish contributions you are proud of and keep your trials as private drafts.*

## Character Grids

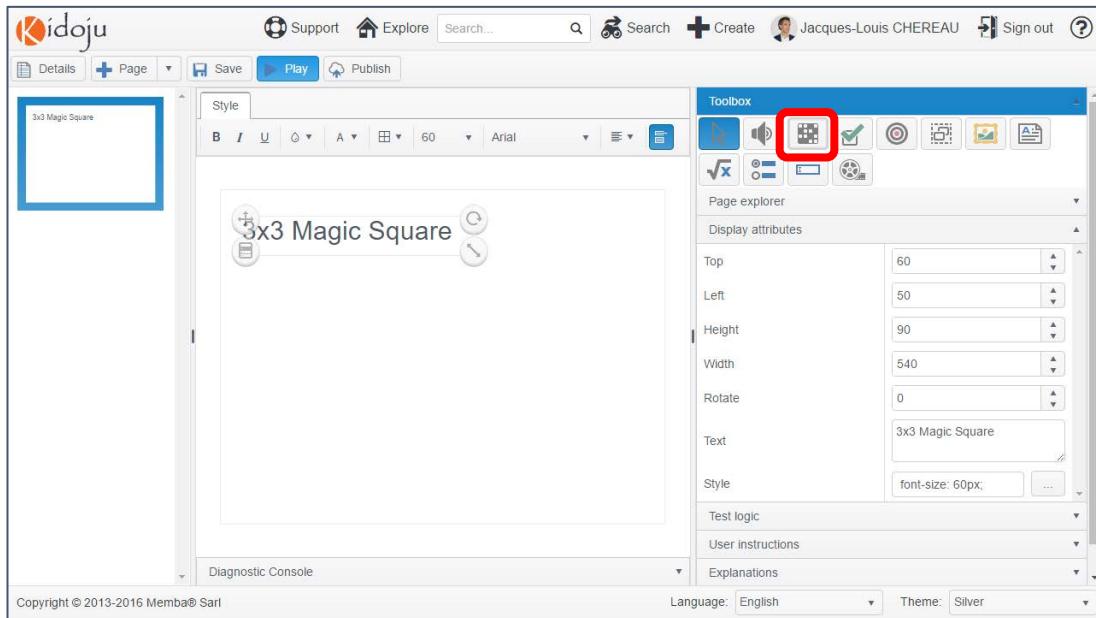
Let us do a 3x3 magic square as explained at <http://www.dr-mikes-math-games-for-kids.com/3x3-magic-square.html>.

In a 3x3 magic square:

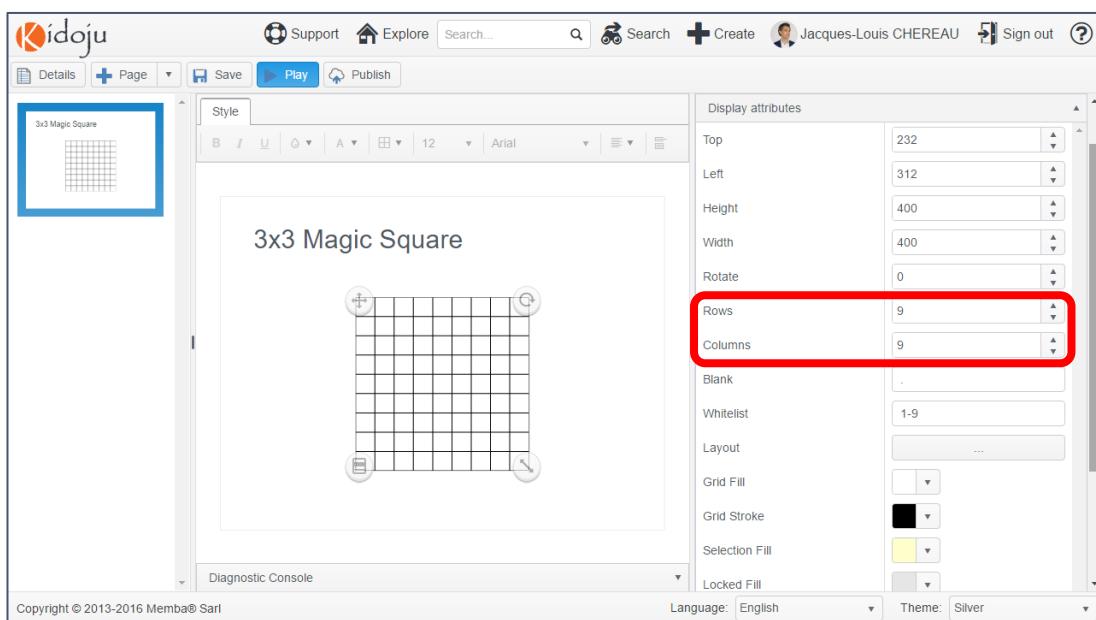
- All digits from 1 to 9 are used;
- The sum of digits on each line, column and diagonal is 15.

We shall disclose two numbers to ensure a unique solution.

Create a new Kidoju quiz as explained at the beginning of the *Teacher Guide* and add a Label as explained in the *Labels* section.



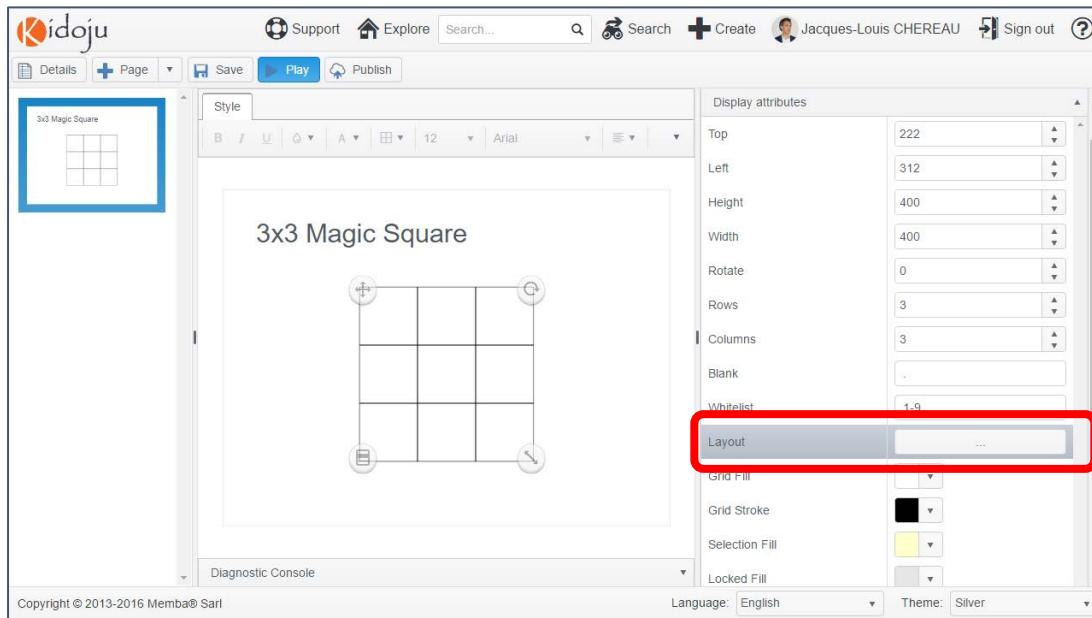
To add a character grid to the stage, select (click) the **Character Grid** tool in the toolbox and click the stage. A new character grid is added to the page with a default size of 9\*9, that is the size of a sudoku.



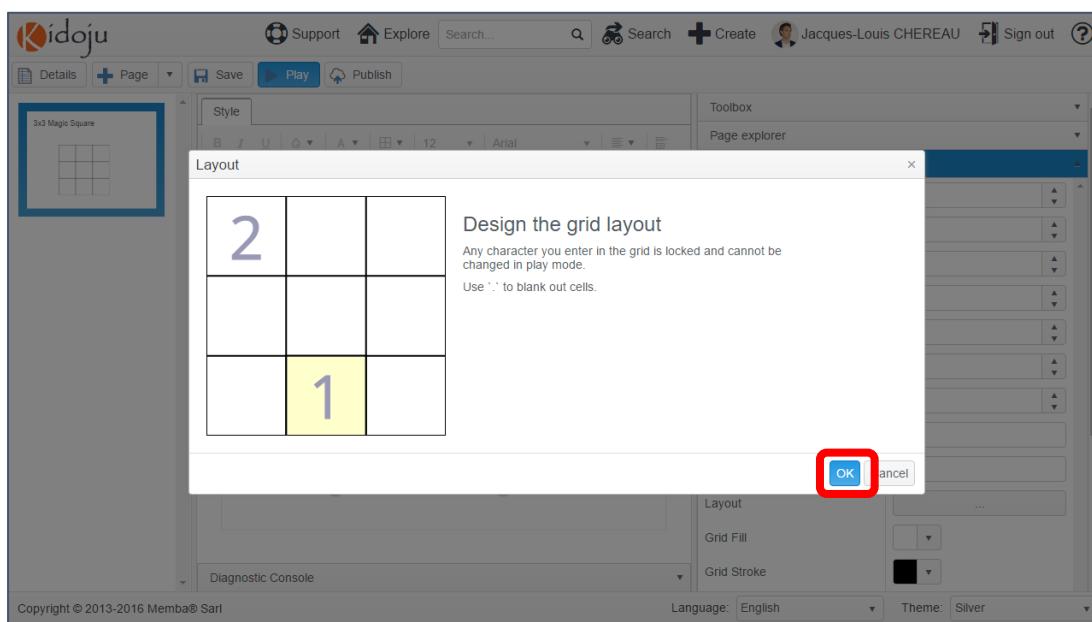
Expand the **Display attributes** collapsible panel of the tools pane.

Keep the . (dot) sign to **Blank** out cells like the black cells in crosswords, but we won't use it here.

Keep the **Whitelist** 1-9 constituted of any numbers from 1 to 9. Another possible whitelist is A-Z. The expected value is actually what you would put between square brackets to make a regular expression. The whitelist is the list of authorized characters in the grid. Any character that does not match the whitelist is discarded.



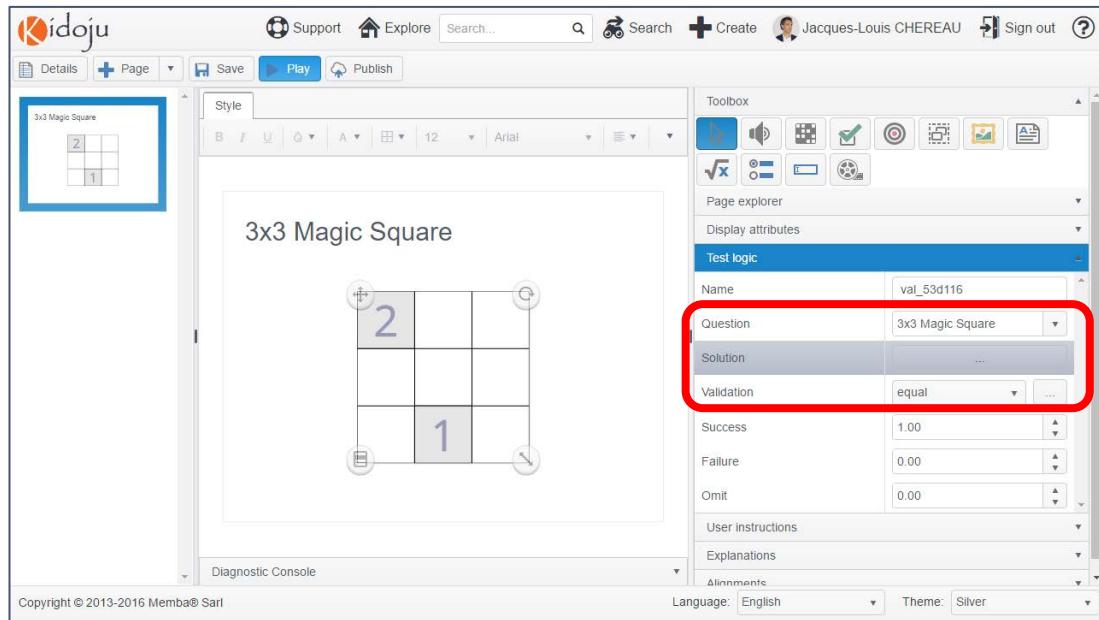
Click the **Layout** button and enter part of the grid as shown here below, then click the **OK** button.



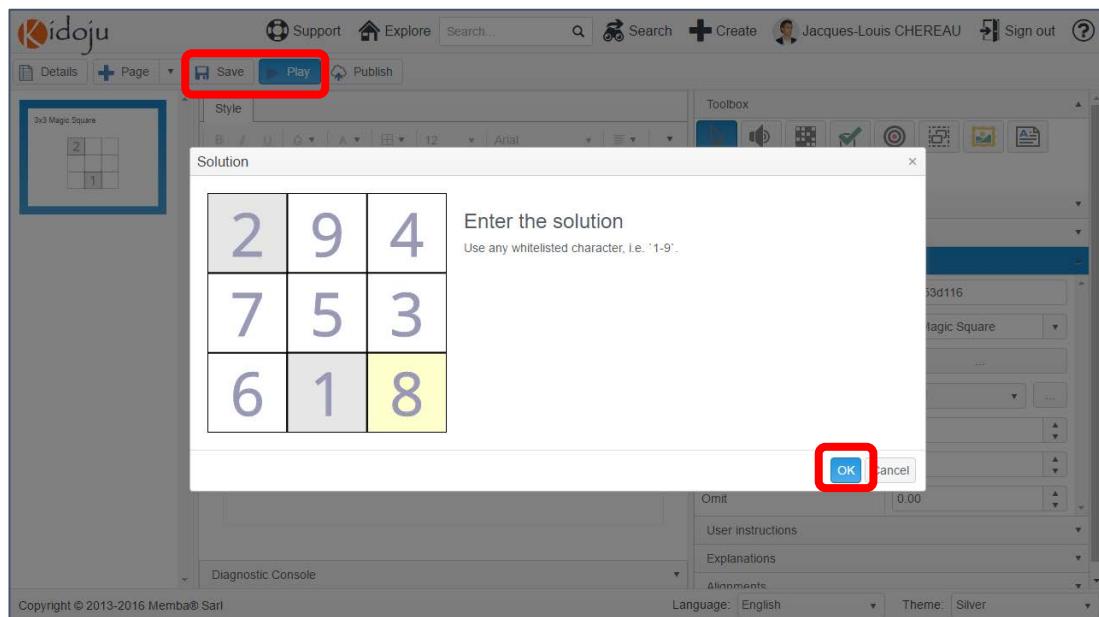
*Note: the whitelist does not apply to the Layout. You can have characters in the initial layout which are not whitelisted.*

The cells you have filled with values in the initial layout are locked and cannot be changed when playing your Kidoju, which is shown by a grey background.

Select the text of the label displayed on the page for the **Question** property in the **Test logic** collapsible panel of the tools pane.



Keep the default value for the **Validation** algorithm and click the **Solution** button to edit the solution as reproduced here below:



Click **OK**, then click **Save** and **Play** your Kidoju.

3x3 Magic Square

2	9	4
7	5	3
6	1	8

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Once the character grid is filled, click the **Submit** button to obtain the score and correction.

You have scored 100%

Page	Question	Answer	Solution	Score	Result
1	3x3 Magic Square	2,9,4 7,5,3 6,1,8	2,9,4 7,5,3 6,1,8	1	

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Click the **Edit** button to return to the *Editor*.

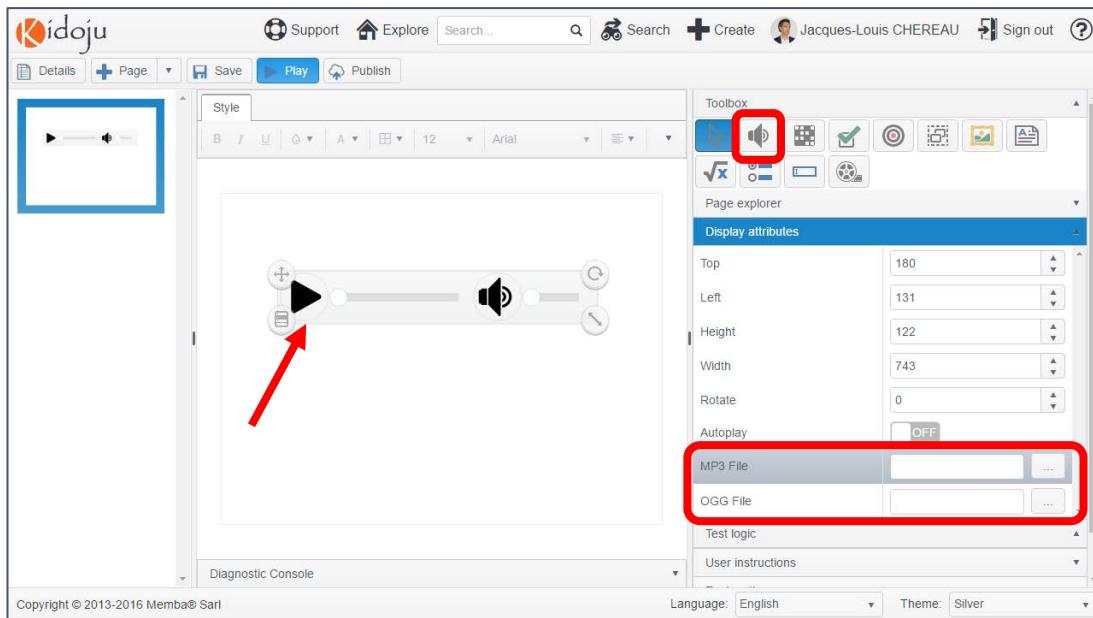
## Audio and video

Audio and video are very similar to images from a workflow perspective. Like images, you add the component on the stage and upload and link the files to play.

Audio play the content of mp3 and ogg files. Video play the content of mp4, ogv and wbem files. You can read more about file formats in the *Audio and video file formats* section of the *Advanced Guide*. Audio and video being very similar, the

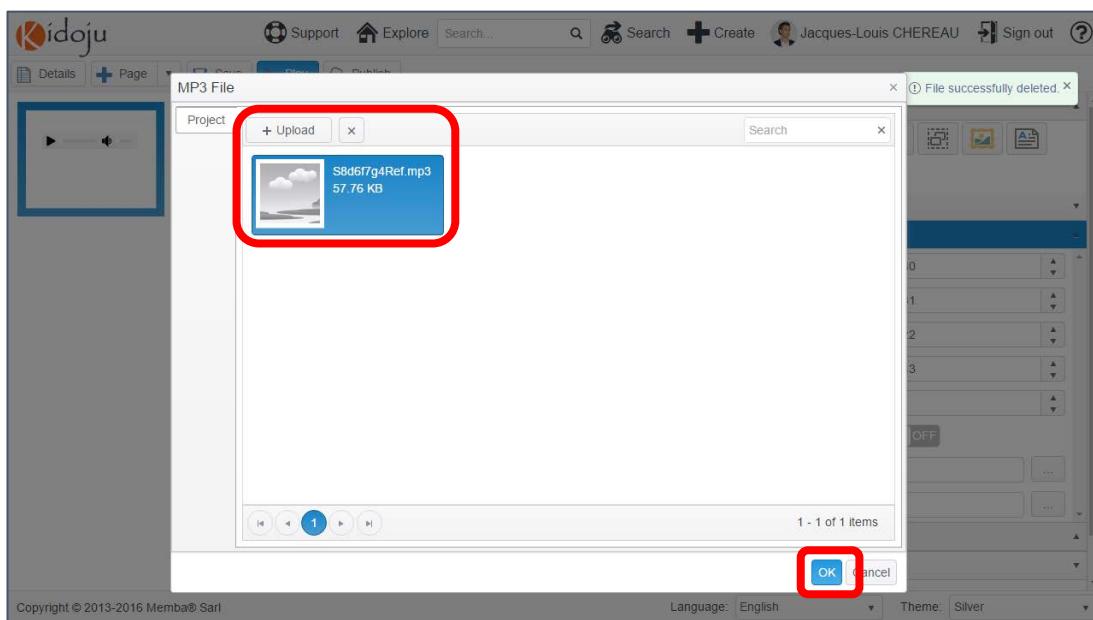
following step-by-step instructions focus on audio. You can try adding videos by yourself.

To add an audio player to the stage, select (click) the **Audio** tool in the toolbox and click the stage. A new audio player is added to the page.



Prepare audio files of your choice. We suggest <http://www.moviesoundclips.net/sound.php?id=151> which you can download before uploading both the mp3 and ogg formats to Kidoju.

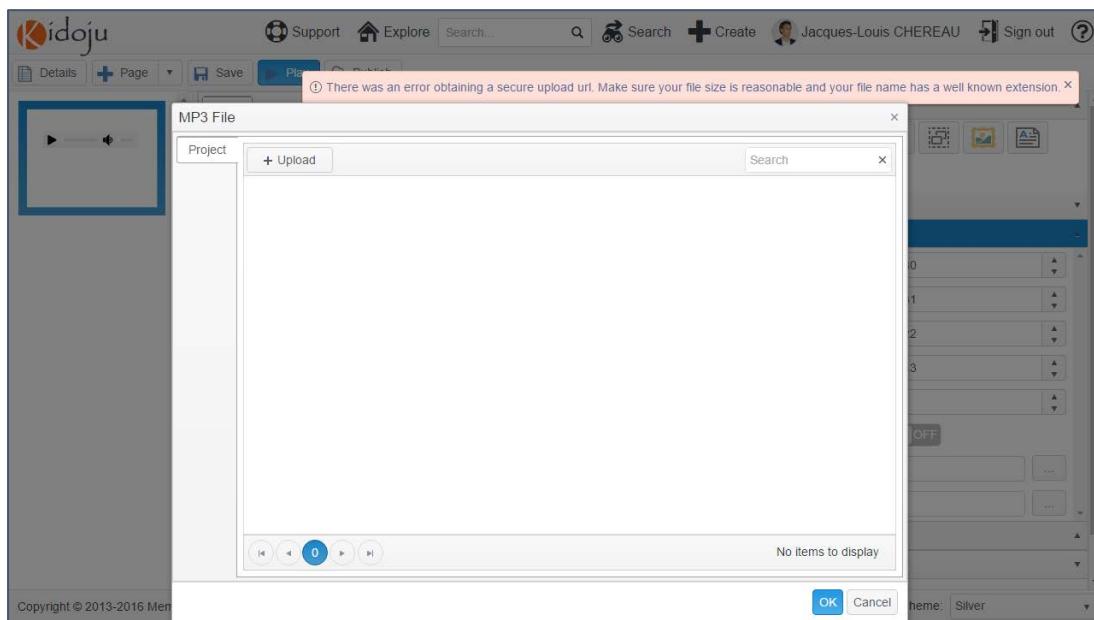
Select respectively the **MP3 File** and **OGG File** properties in the **Display attributes** collapsible panel of the tools pane and click the [...] button. Click the **Upload** button, select your file on your hard drive and click the **Open** button.



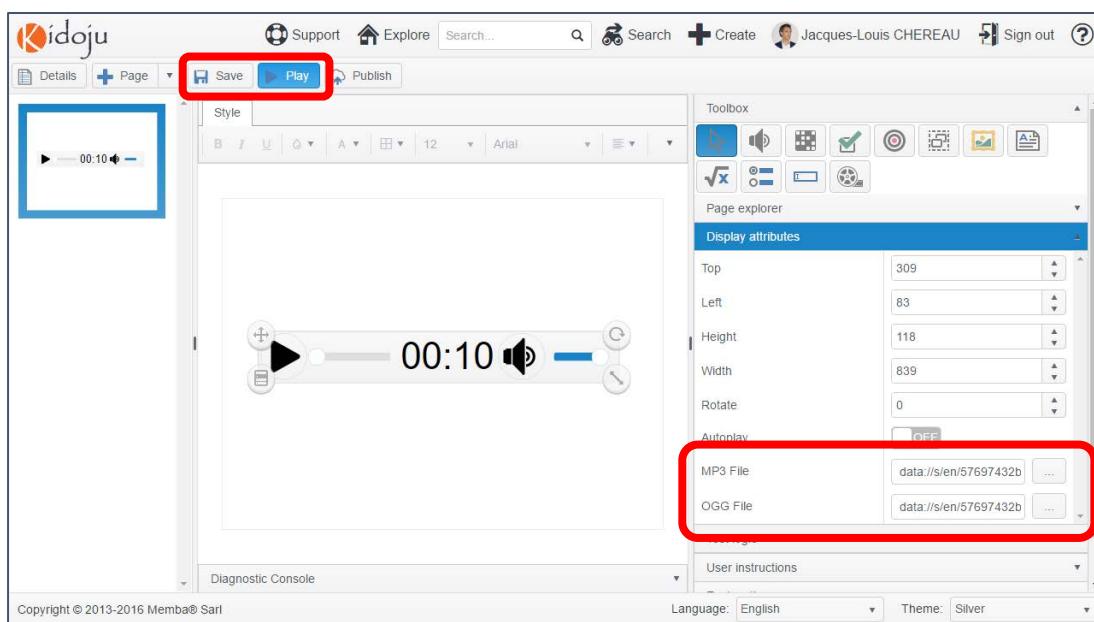
When your audio file is displayed in the **MP3 File** dialog as above, it has been uploaded onto our servers. Click **OK** to assign this file to the audio player.

*Note: while uploading your file, you might get the following error: "There was an error obtaining a secure upload url. Make sure your file size is reasonable and your file name has a well-known extension".*

*In this case, most probably your file is too big. Considering mobile devices on 3G/4G plans, we limit the size of files you can upload. These limits are currently 400 Kb for images and audio files and 4 Mb for video files.*



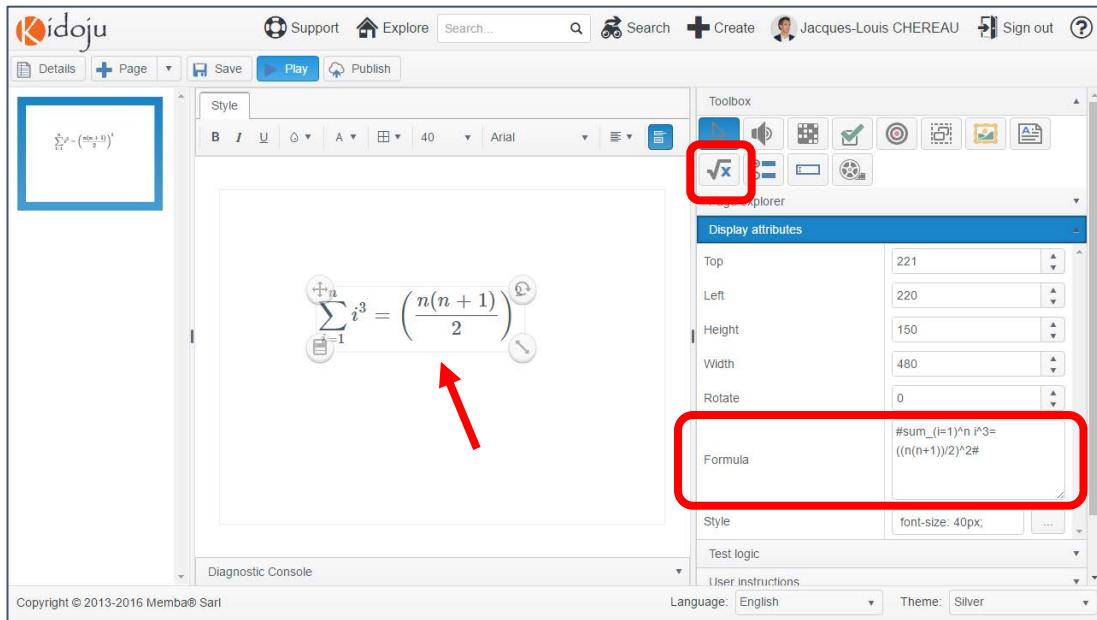
After assigning an MP3 File and an OGG File, your audio player is now ready to be played. After clicking the **Save** button, **Play** your Kidoju and your audio files.



## Mathematic expressions

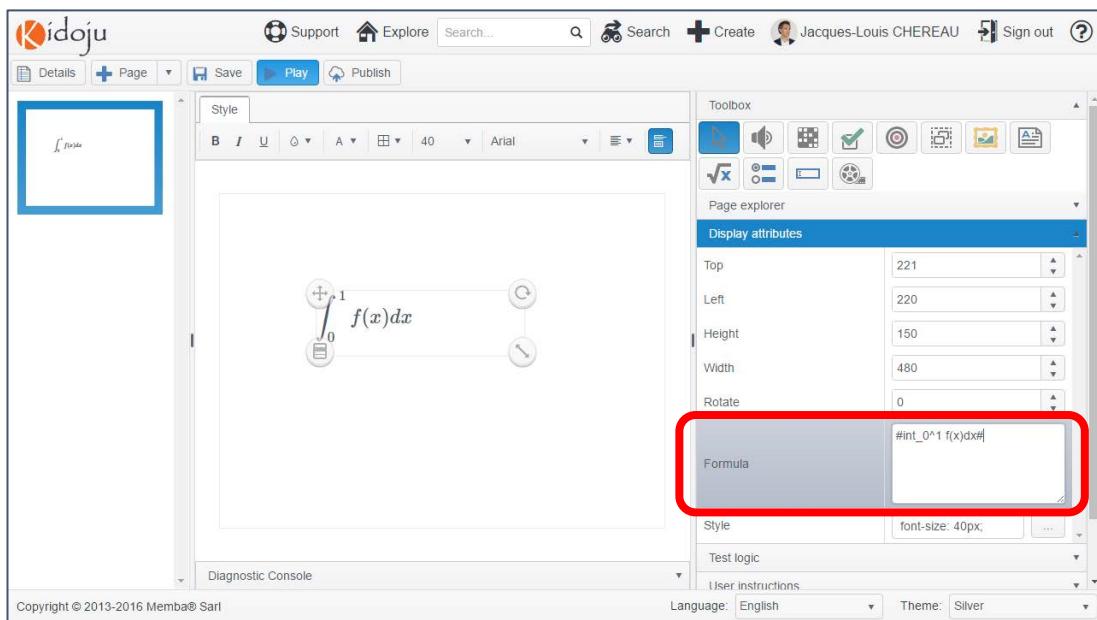
Mathematic expressions are similar to labels, expect they have the capability to interpret a textual expression into a better graphic representation of a formula.

To add a mathematic expression to the stage, select (click) the **Mathematic Expression** tool in the toolbox and click the stage. A new mathematic expression is added to the page.



Position and resize the label as explained in the *Moving, rotating, resizing and aligning components* chapter.

To change the formula displayed, expand the **Display attributes** collapsible panel and change the value of the **Formula** property for `#int_0^1 f(x)dx#`.



To learn more about formulas please refer to the *LaTeX and AsciiMath* section of the Advanced Guide.

## What other tools are coming next?

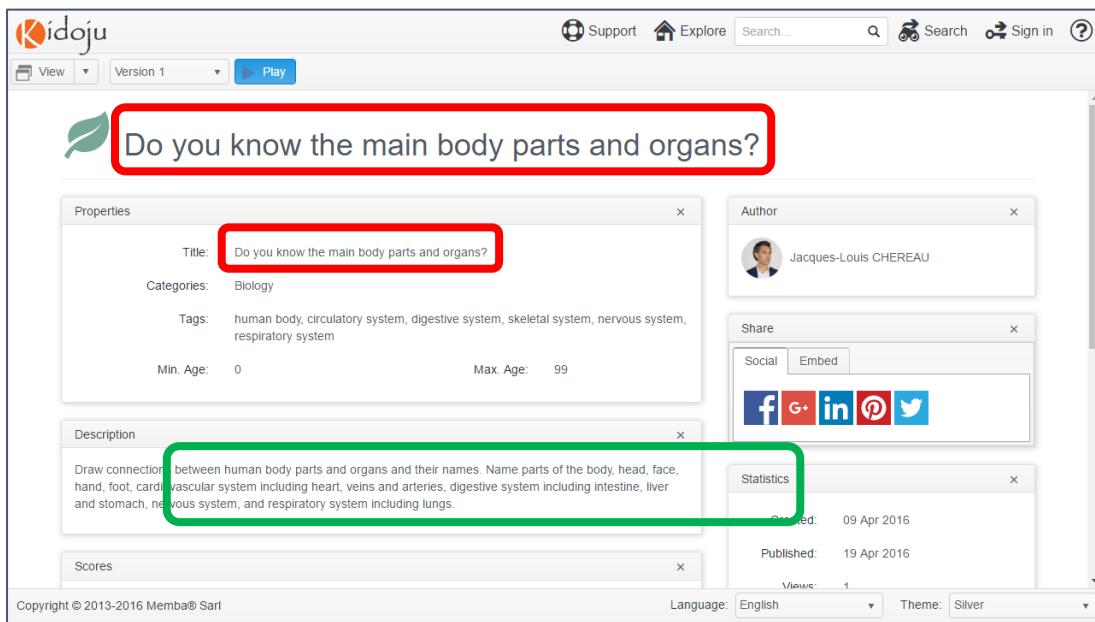
Although we do not commit to any deadline, we are working hard to expand this toolset with:

- A vector drawing tool,
- A code editor targeted at software programming quizzes,
- Spreadsheets and tables,
- Charts and plots,
- Interactive maps,
- A chemical formula editor;
- A math geometry editor.

Please make suggestions or vote for existing suggestions at  
<https://kidoju.uservoice.com/forums/152569-general>.

## SEO indexing and social sharing

It is important you understand the value of properly describing your Kidoju quiz on the *Details page*. For this purpose, we show you here after the **Title** (surrounded in red) and the **Description** (surrounded in green) in various environments.



The screenshot shows the Kidoju quiz details page. At the top, there's a navigation bar with 'View', 'Version 1', 'Play', 'Support', 'Explore', a search bar, and 'Sign in'. Below the navigation, the quiz title 'Do you know the main body parts and organs?' is displayed with a red box around it. To the right, there's a 'Properties' panel with fields for Title (red box), Categories (Biology), Tags (human body, circulatory system, digestive system, skeletal system, nervous system, respiratory system), and Age range (Min. Age: 0, Max. Age: 99). Next to it is an 'Author' panel showing Jacques-Louis CHEREAU. Below these are 'Share' and 'Description' panels. The 'Description' panel contains a green box around the text: 'Draw connections between human body parts and organs and their names. Name parts of the body, head, face, hand, foot, cardiovascular system including heart, veins and arteries, digestive system including intestine, liver and stomach, nervous system, and respiratory system including lungs.' To the right of the description is a 'Statistics' panel with a green box around the last few lines: 'Created: 09 Apr 2016', 'Published: 19 Apr 2016', and 'Visitors: 1'. At the bottom, there's a 'Scores' panel and footer information: 'Copyright © 2013-2016 Memba® Sarl', 'Language: English', 'Theme: Silver', and a note about version 2016.09.07.

For improved performances, only the title is displayed in the *Explorer*.

Copyright © 2013-2016 Memba® Sarl

Language: English Theme: Silver

1 - 5 of 41 items

Google search displays the title and description as shown below:

All Images Shopping News Videos More ▾ Search tools

1 result (0.28 seconds)

**Do you know the main body parts and organs? - Kidoju**

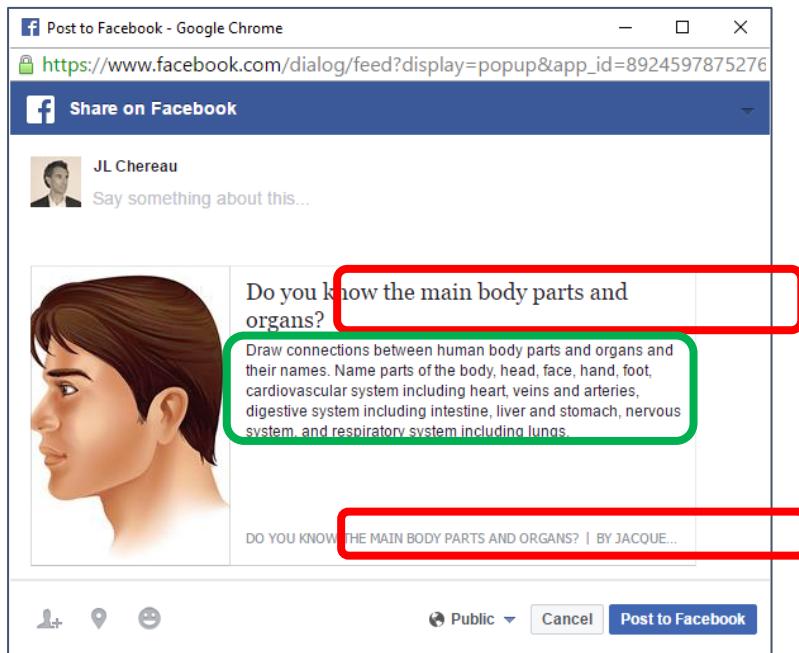
<https://www.kidoju.com/en/s/5709243454a8ac1b006402ah> ▾

19 Apr 2016 - Draw connections between human body parts and organs on drawings and their names in labels. Name parts of the body, head, face, hand, ...

Johannus Organs - Builders of classical organs  
Ad [www.johannus.com/](http://www.johannus.com/) ▾  
Digital home and church organs.

New York Organ Donor - New Yorker's Need Your Help

The Facebook share dialog displays the title and description as shown below:

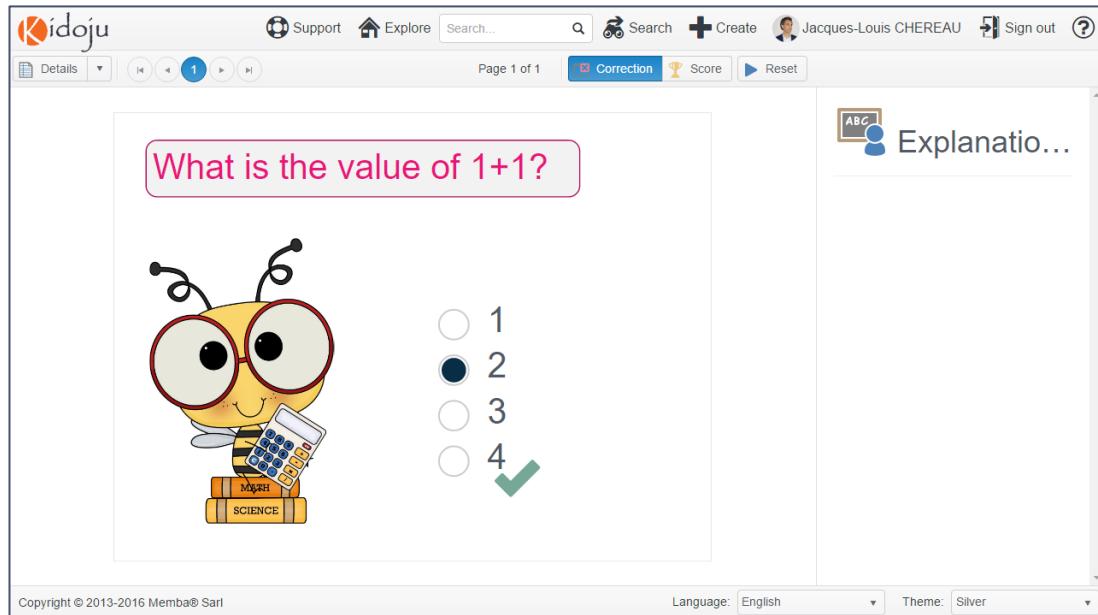


*Note: The image used in social network share dialogs is the largest image uploaded for the related Kidoju quiz.*

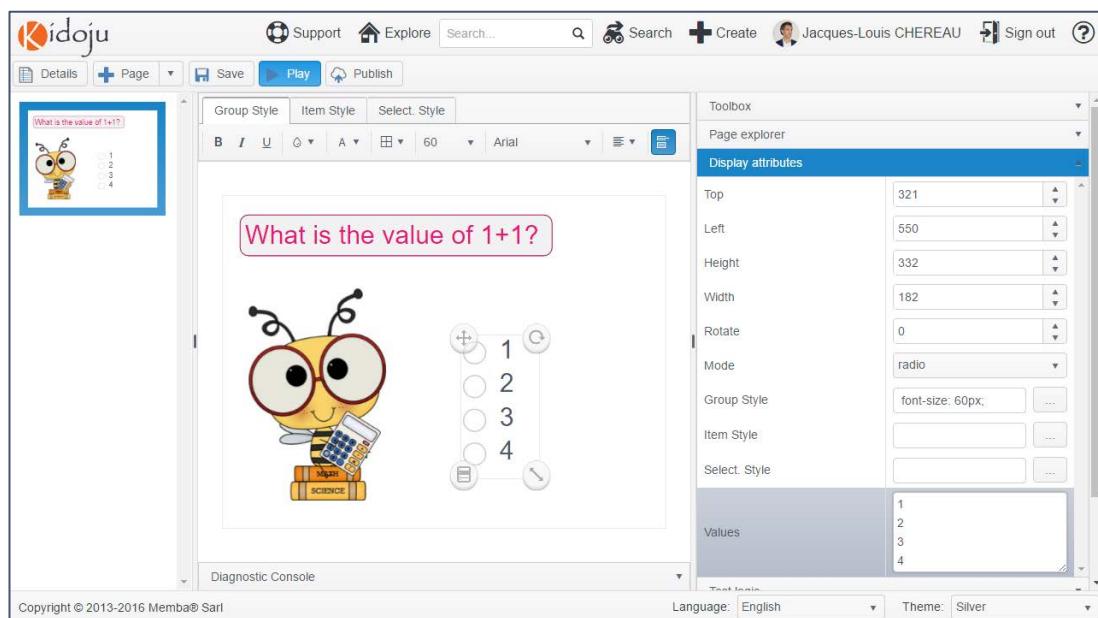
# Advanced Guide

## Position of correction ticks and crosses

In the *Student Guide*, you have discovered the *Player* in play mode and review (correction) mode. Review mode shows ticks and crosses as in the following example:



The position of the correction tick or cross is actually determined by the position of the resize handle as represented here below.



In the following screenshot, we have moved the resize handle away from the content of the quiz component (1, 2, 3, 4) to the bottom right corner of the stage.

The screenshot shows the Kidoju editor interface. At the top, there are navigation links: Support, Explore, Search..., Create, and Sign out. On the left, there's a sidebar with 'Details', 'Page', 'Save', 'Play', and 'Publish' buttons. Below these are style tools for Group Style, Item Style, and Select Style, along with font size and type dropdowns. A toolbox on the right lists: Page explorer, Display attributes, Test logic, User Instructions, Explanations, and Alignments. The main content area contains a question card with the text 'What is the value of 1+1?' and a cartoon bee character holding a calculator. Below the question are four radio buttons labeled 1, 2, 3, and 4. To the right of each radio button is a small circular handle. A red checkmark is positioned near the handle for option 3. The bottom of the screen shows a diagnostic console and language/theme settings.

The correction tick or cross follows the position of the resize handle as shown on the following screenshot.

The screenshot shows the Kidoju player interface. At the top, there are navigation links: Support, Explore, Search..., Create, and Sign out. In the center, it says 'Page 1 of 1'. Below the page number are buttons for 'Correction' (which is highlighted), 'Score', and 'Reset'. The main content area contains the same question card with the bee character and the list of options. The radio button for '3' is filled with a dark blue color, indicating it is the correct answer. A large red X is placed next to the handle for option 3, indicating it is incorrect. The bottom of the screen shows copyright information and language/theme settings.

Therefore, consider carefully where you position the resize handle of the components which participate in the test logic:

- You do not want a resize handle too close to the content because font sizes are not consistent across devices and you need to allow some space;
- You do not want a resize handle too far away from the content because the tick or cross might interfere with other components and become ambiguous.

## Audio and video file formats

Audio and video file formats (and codecs) are a complex issue to run across all types of devices and browsers.

### Audio

There are two main audio file formats required to run audio across devices and browsers: MP3 and OGG.

Extension	Chrome	Edge/IE	Firefox	Opera	Safari
MP3	✓	✓	✓		✓
OGG	✓		✓	✓	

Currently:

1. If you only upload one format, use MP3 which has the largest support.
2. For even better support, you need to also upload the OGG format to our servers (we plan to convert files automatically in the future but in the meantime please consider using cloudconvert.com, zamzar.com or any other file conversion services);
3. Some browsers may restrict the upload of file formats they cannot identify, which is the reason why we recommend using Chrome.

*Note: we might replace MP3 with M4A (AAC) in the near future.*

### Video

There are three main video file formats required to run video across devices and browsers: MP4 and either OGV or WEBM.

Extension	Chrome	Edge/IE	Firefox	Opera	Safari
MP4	✓	✓	✓	✓	✓
OGV	✓		✓	✓	
WEBM	✓		✓	✓	

Currently:

1. If you only upload one format, use MP4 which has the largest support.
2. For even better support, you need to also upload the OGV or WEBM format to our servers (we plan to convert files automatically in the future but in the meantime please consider using cloudconvert.com, zamzar.com or any other file conversion services);
3. Some browsers may restrict the upload of file formats they cannot identify, which is the reason why we recommend using Chrome.

## Markdown

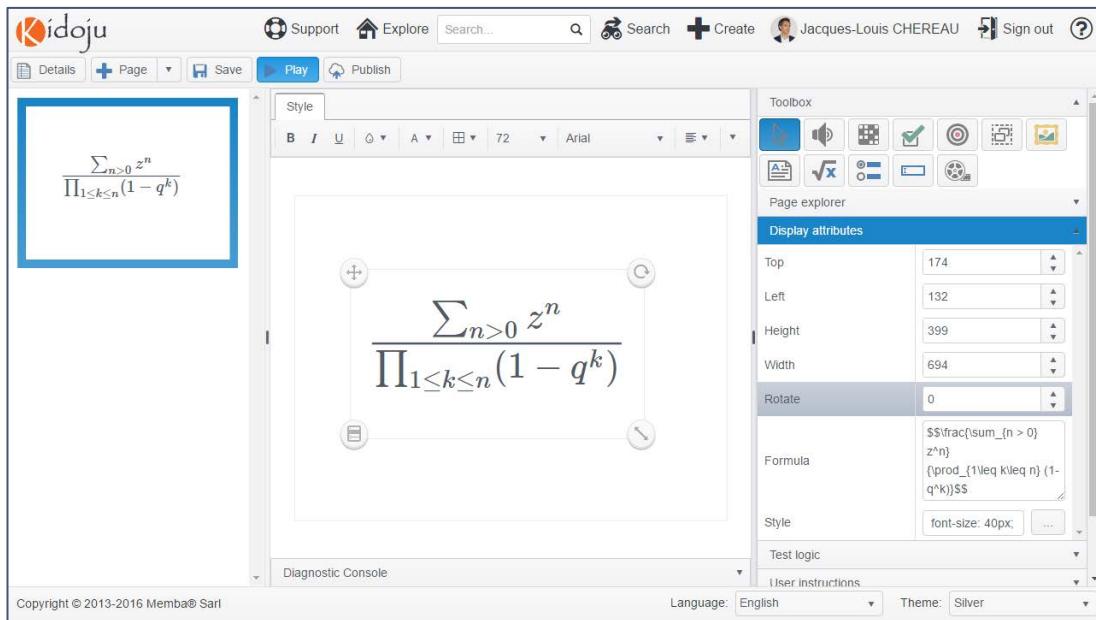
Markdown is a simple and secure way to add formatting to text in web applications. Kidoju uses markdown syntax for descriptions including *User instructions and explanations*.

Formatted text	Markdown
<i>Italic</i>	Text surrounded by * or _:  * <b>Italic</b> *
<b>Bold</b>	Text surrounded by ** or __:  ** <b>Bold</b> **
<b>Heading</b>	Line starting with hashtags (#) where the number of # defines the heading level:  ## <b>Heading</b>
1. Numbered 2. List	Set of successive lines preceded by any number and a period:  1. <b>Numbered</b> 2. <b>List</b>
• Bulleted • List	Set of successive lines preceded by *, + or -:  - <b>Bulleted</b> - <b>List</b>
<a href="#">Hyperlink</a>	Text between square brackets followed by url between parentheses:  [ <a href="#">Hyperlink</a> ](http://www.kidoju.com)
	Exclamation mark followed by alternate text between square brackets followed by source url between parentheses:  ! [ Alt. Text ](http://www.kidoju.com/image.jpg)

A character can always be enforced by preceding it with a backslash. For example, \\*italic\\* will actually display the word *Italic* between two stars in regular style (without emphasis).

## LaTeX and AsciiMath

Mathematic expressions are displayed using MathJax. MathJax converts a LaTeX or AsciiMath representation of a mathematic expression into complex HTML or an image.



AsciiMath expressions need to be surrounded by hashtags (#) to be parsed properly like in:

```
#sum_(i=1)^n i^3=((n(n+1))/2)^2#
```

LaTeX expressions need to be surrounded by double dollar signs (\$\$) to be parsed properly like in:

```
$$\frac{\sum_{n > 0} z^n}{\prod_{1 \leq k \leq n} (1-q^k)}$$
```

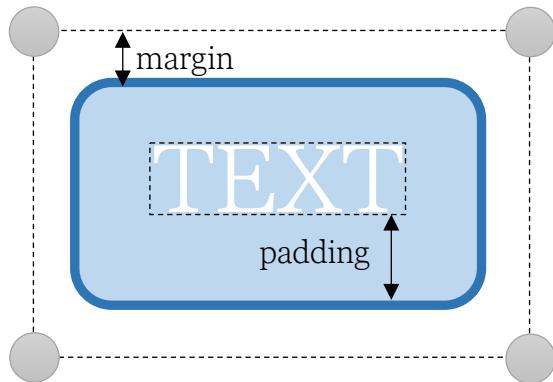
A LaTeX or AsciiMath tutorial goes beyond the scope of this user guide. AsciiMath is simpler. LaTeX is more powerful. We recommend the following resources among other resources you can find on the web:

1. <https://www.mathjax.org/>
2. <http://asciimath.org/>
3. <ftp://ftp.ams.org/pub/tex/doc/amsmath/short-math-guide.pdf>
4. <http://www.math.harvard.edu/texman/>

## CSS styles

We cannot cover the diversity of Cascading Style Sheets (CSS) attributes to define styles. A CSS style is a collection of attributes and values where each attribute is separated from its value by a colon (:) and pairs of “attribute:value” are separated from each other by semi-colons (;), like in `background-color:#ffffff; color:#000000;`.

*Note: colors are only used to help you distinguish attributes in green from values in blue from separators in red.*

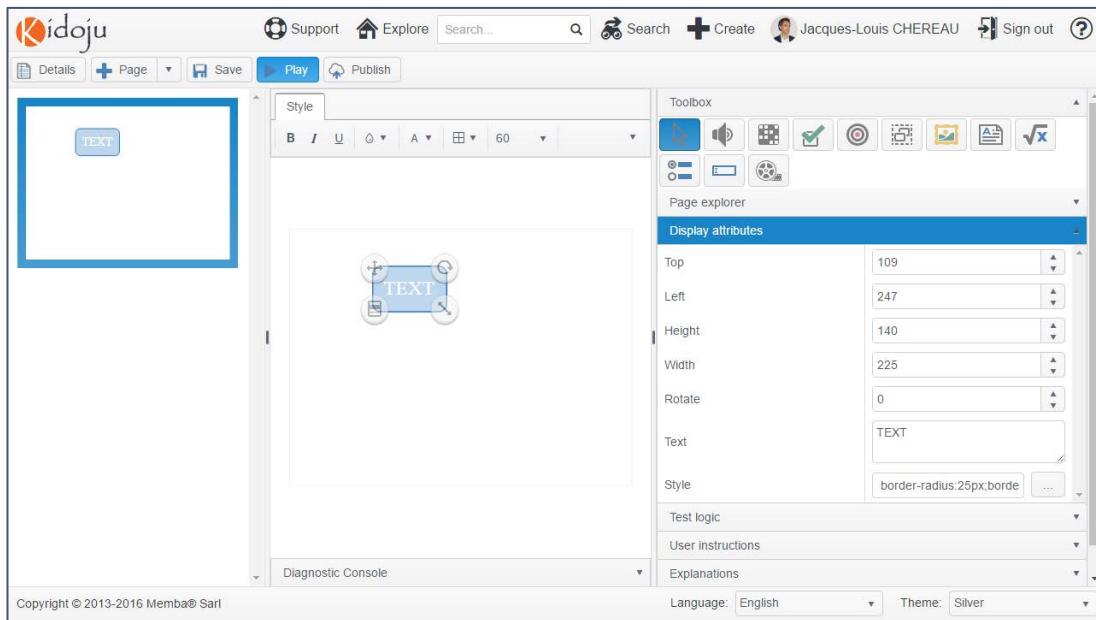


A label similar to the above can be achieved with the following style attributes which are self-explicit:

Attribute	Value
background-color	#bdd7ee
border-color	#2e75b6
border-radius	25px
border-style	Solid
border-width	4px
Color	#ffffff
font-family	Times New Roman
font-size	60px
Padding	30px

*Note: colors are expressed as hexadecimal values where each couple of digits represents respectively the amount of red, green and blue (RGB).*

*Note: sizes are expressed in pixels where a pixel is a dot on the screen. A typical monitor resolution is either 72 ppi or 96 ppi (pixels per inch). Retina monitors have higher ppi. A typical printer prints at 300 dpi (dots per inch).*



If you want to know more about CSS, please consider visiting <http://www.w3schools.com/css/>.

## Regular Expressions

The “match” and “ignoreCaseMatch” validation algorithms of *Textboxes* use regular expressions to validate a user answer typed in a textbox.

Regular expressions are extensively documented at <http://www.regular-expressions.info/> and this chapter can only be considered an introduction. We recommend that you test your regular expressions at <http://www.regexr.com/>.

RegExr is an online tool to learn, build, & test Regular Expressions (RegEx / RegExp).

- Results update in **real-time** as you type.
- **Roll over** a match or expression for details.
- **Save & share** expressions with others.
- Use **Tools** to explore your results.
- Browse the **Library** for help & examples.
- **Undo & Redo** with Ctrl-Z / Y.
- Search for & rate **Community** patterns.

The `/i` option at the end of the regular expression `^napol[eé]on$/i` corresponds to “ignoreCaseMatch”. It matches both “napoleon” and “NAPOLEON”.

^ and \$ are anchors which work has follows:

- The regular expression “napoleon” matches any value that contains the word “napoleon”.
- The regular expression “^napoleon” matches any value that starts with the word “napoleon”.
- The regular expression “napoleon\$” matches any value that ends with the word “napoleon”.
- The regular expression “^napoleon\$” only matches the exact word “napoleon”.

[eé] matches any character in the set delimited by square brackets. In this case, [eé] matches both “e” and “é”. Accordingly, “^napol[eé]on\$” matches both “napoleon” and “napoléon”.

[a-z] matches any alphabetical character from a to z.

[0-9] matches any digit from 0 to 9.

[a-z]{2} matches any combination of exactly 2 alphabetical character from a to z. Therefore [a-z]{1} is equivalent to [a-z].

[0-9]{2,4} matches any combination of 2 to 4 digits.

[a-z]\* matches 0 or more alphabetical characters.

[a-z]+ matches 1 or more alphabetical characters.

[a-zA-Z\_], that is any alphabetical character (lower case or upper case) or any digit or underscore can be shortened as \w.

^(napol[eé]on|bonaparte)\$ matches both NapOléOn and BOnApArte.

Because a dash (-) designates a range, dashes need to be escaped as \- in regular expressions. The same applies to square brackets and dollar signs which need to be escaped respectively as \\[ , \\] and \\\$ if used literally in regular expressions.

\s is used to match a space, a tab (\t) or a line feed (\n).

We are only scratching the surface to get you started. Regular expressions are extremely powerful and allow complex validations without writing any programming code.

## JavaScript custom validations

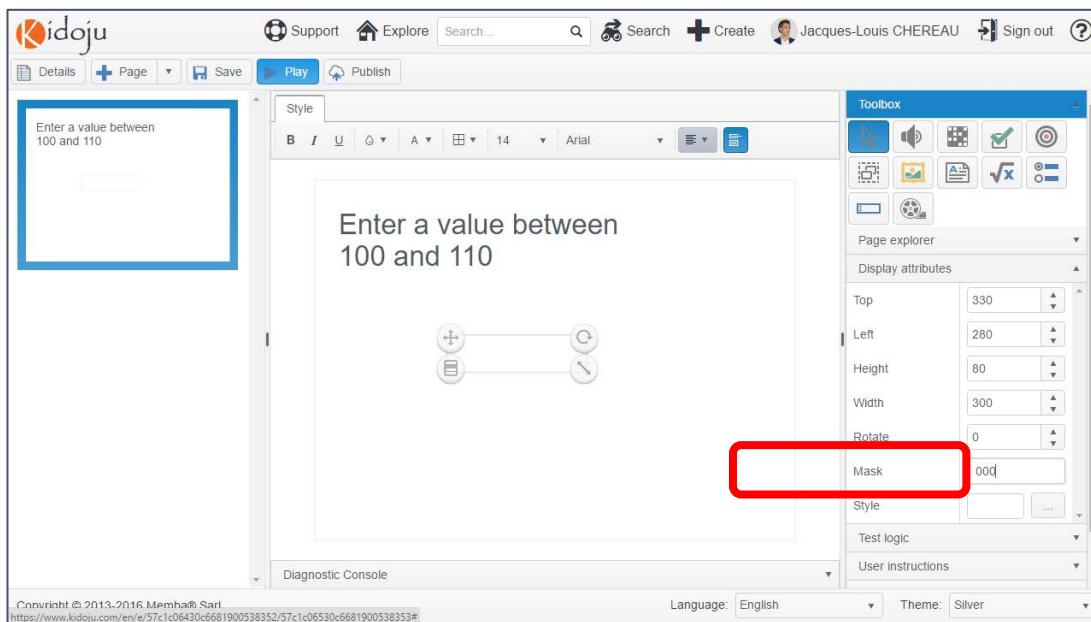
For even more complex custom validation rules, Kidoju offers the possibility to write your own code. For the security of our users:

- Your code is sandboxed in a web worker which does not have access to the document object model and unsafe objects including XMLHttpRequest and localStorage are disabled;
- Your code is limited to 1000 characters;

- The execution of your code is limited to 100ms after which the web worker that runs your custom validation code is killed.

In the first example, you will validate that the value entered in a Textbox is between 100 and 110 inclusive.

Design your page as represented here below. After selecting the Textbox on the page, expand the **Display attribute** collapsible panel of the tools pane and add a **Mask** of 000 to constrain any user entry to 3 digits as explained in the *Textboxes* chapter.



Then expand the **Test logic** collapsible panel of the tools pane and enter a **Question** and a **Solution** to be displayed in the score report. The solution will only be used as an example of correct value and will not be part of the validation algorithm.

The screenshot shows the Kidoju editor interface. On the left, there's a question card with the text "Enter a value between 100 and 110". In the center, there's a diagram with two nodes connected by arrows. On the right, the "Validation" section of the sidebar is highlighted with a red box. It shows the "Validation" dropdown set to "equal", with "solution" set to "105". Below that, "Success" is set to "1.00", "Failure" to "0.00", and "Omit" to "0.00".

Then click the [...] button corresponding to the **Validation** property to open the script editor. Teaching JavaScript is beyond the scope of this User Guise and we assume you have a basic knowledge of JavaScript programming.

The screenshot shows the Kidoju editor with the Validation dialog box open. The "Validation" dropdown is set to "custom" and the code editor contains the following JavaScript function:

```

function validate(value, solution, all) {
    return parseInt(value, 10) >= 100 && parseInt(value, 10) <= 110;
}

```

Enter the following function:

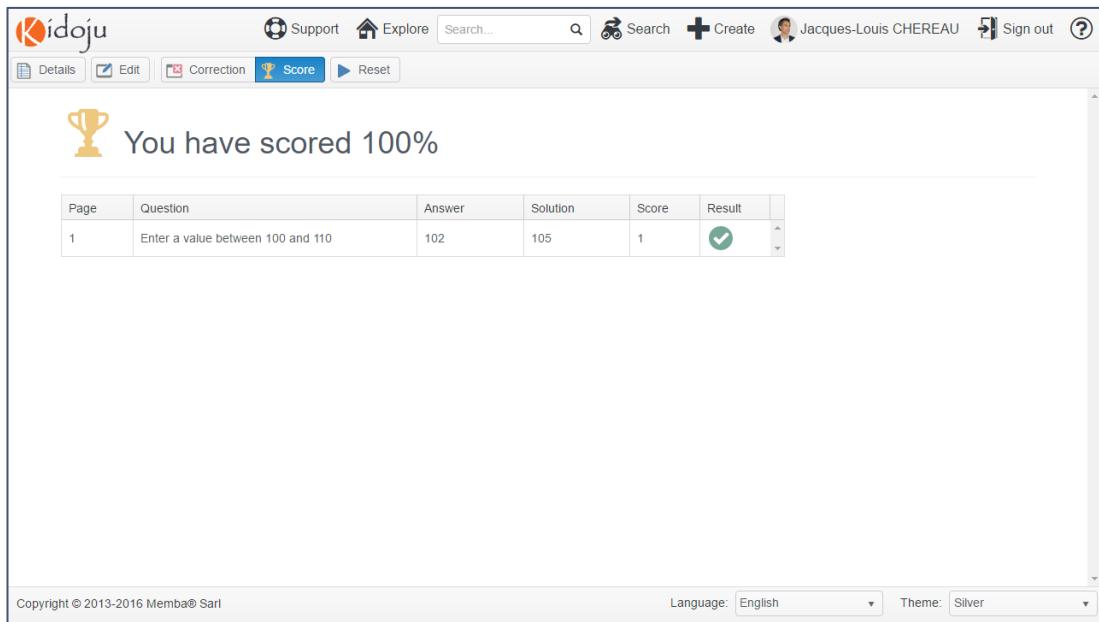
```

function validate(value, solution, all) {
    return parseInt(value, 10) >= 100 && parseInt(value, 10) <= 110;
}

```

This function validates that the value entered parses as an Integer comprised between 100 and 110 included.

Click **OK**, then click **Save** and **Play** your Kidoju.



The screenshot shows the Kidoju application interface. At the top, there is a navigation bar with links for Support, Explore, Search, Create, and Sign out. A user profile for "Jacques-Louis CHEREAU" is also visible. Below the navigation bar, there is a toolbar with buttons for Details, Edit, Correction, Score (which is highlighted in blue), and Reset.

The main content area displays a message: "You have scored 100%" next to a gold trophy icon. Below this, there is a table with the following data:

Page	Question	Answer	Solution	Score	Result
1	Enter a value between 100 and 110	102	105	1	✓

At the bottom of the screen, there are copyright information ("Copyright © 2013-2016 Memba® Sarl"), language settings ("Language: English"), and theme settings ("Theme: Silver").

*Note: Note that the solution is only given as an example and Kidoju validates a different value as a correct answer.*