



«Educational Robotics at Schools Online with Augmented Reality»
eROBSON ERASMUS+ KA2

How to use ARTutor for eROBSON



What is ARTutor?



- ARTutor is an Augmented Reality Educational Platform developed by Advanced Educational Technologies and Mobile Applications (AETMA) Research Lab at the International Hellenic University, since 2016.
- ARTutor is available free of cost to all the educators and the students around the globe, in order to help them to develop technology enhanced educational material and improve the educational performances and experiences.

What is ARTutor?



- The main impact of ARTutor in the field of education can be summarized to the following objectives:
 - Maximize students' engagement to the educational material (textbooks).
 - Enable teachers with limited IT skills to develop augmented reality books and create highly engaging and immersive educational activities and experiences in the class.
 - The implementation of a single mobile application to enable students to access all the augmented reality books in order to enhance their study and to promote independent, self-paced distance learning
 - Easy interaction with the enhanced digital content of any book using haptic commands in order to assist `even students with movement disabilities



Where can I use ARTutor?

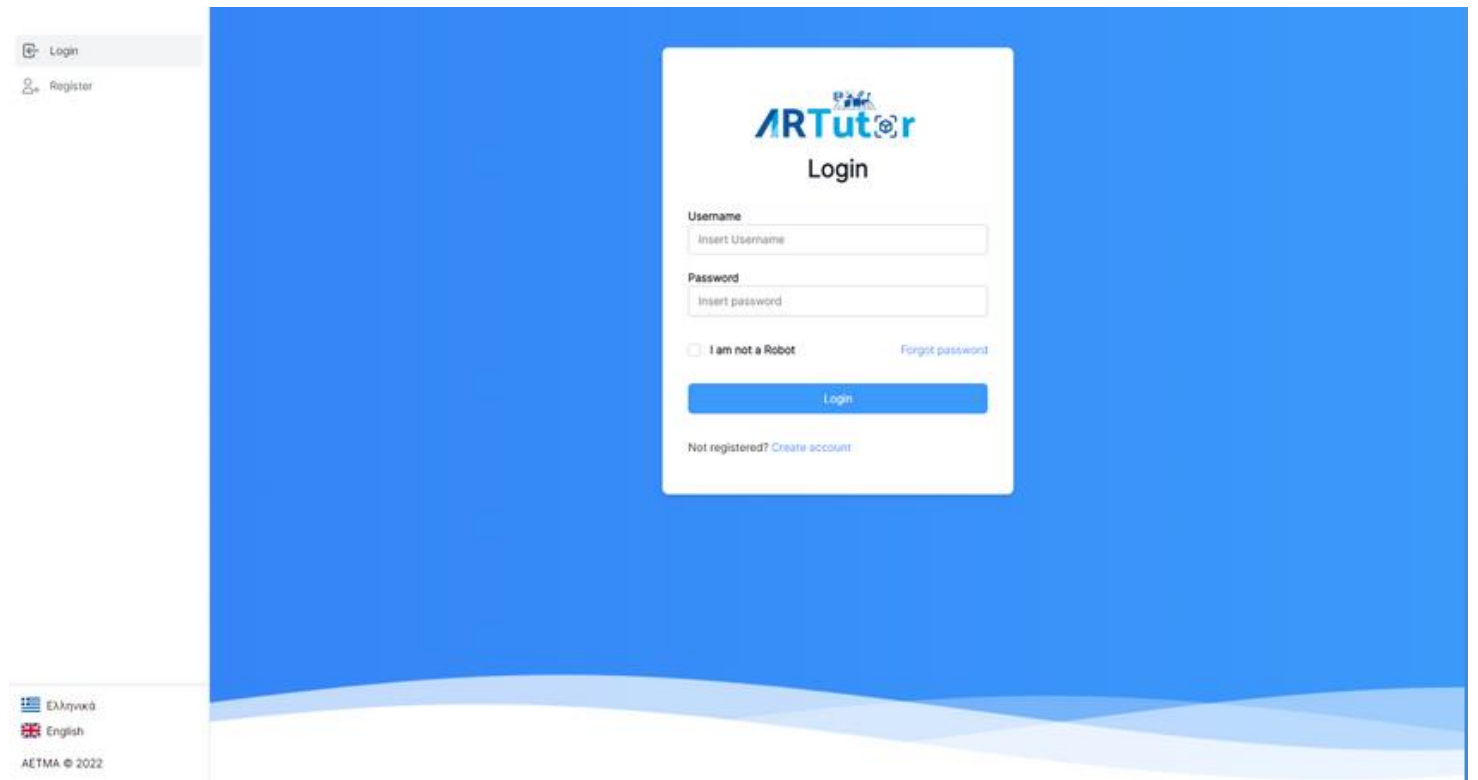


- ARTutor is a domain-independent platform that can be used in many fields.
 - In publishing
 - In education
 - In marketing
 - In museums
 - Training
 - Treasure hunt
 - Escape room

How to use the ARTutor Step 1



- Register for free or login if you have already registered

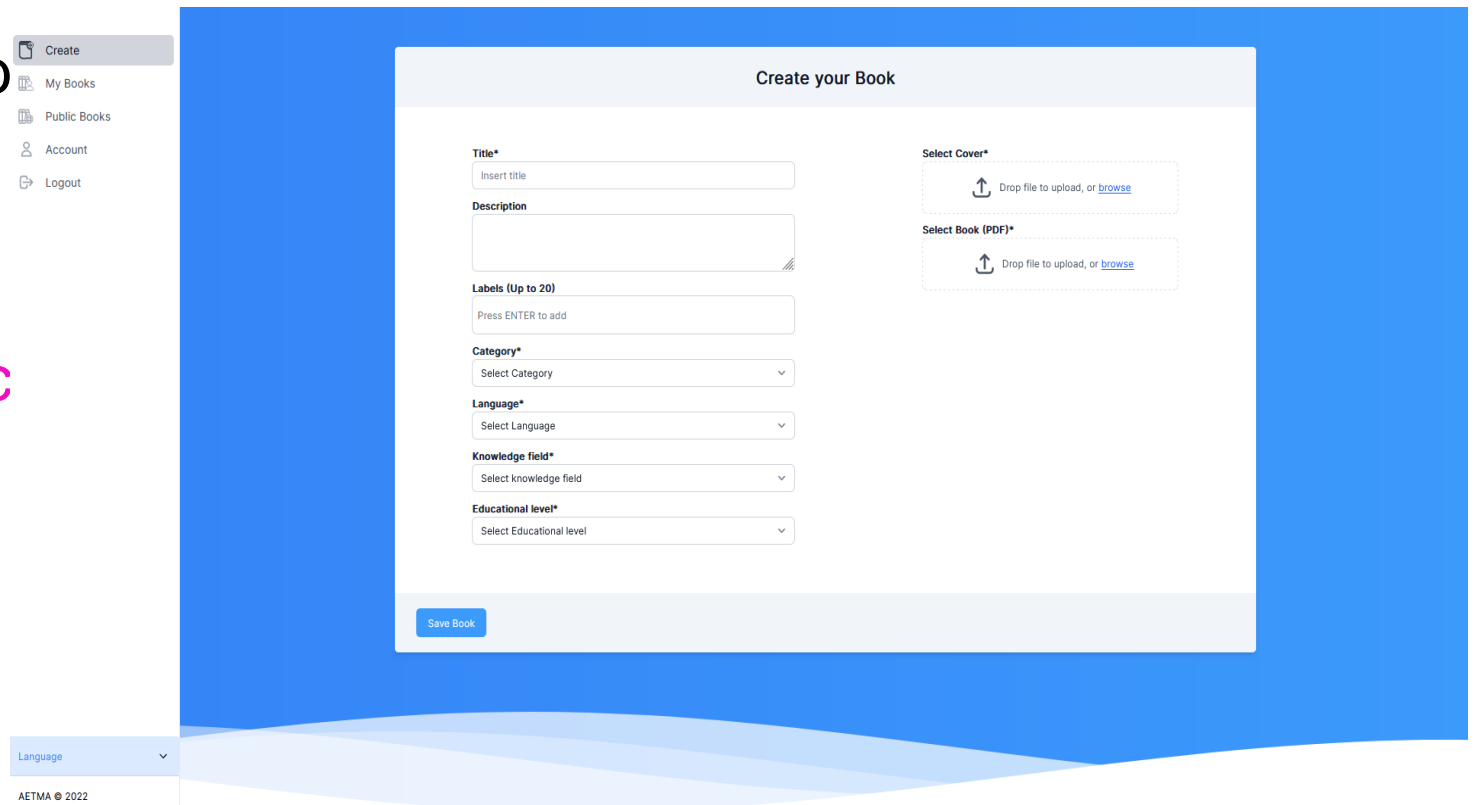


The screenshot shows the ARTutor Login page. On the left, there are links for 'Login' and 'Register'. The main content area is a white box on a blue background. It features the ARTutor logo at the top, followed by the word 'Login'. Below this are two input fields: 'Username' with the placeholder 'Insert Username' and 'Password' with the placeholder 'Insert password'. There is a checkbox labeled 'I am not a Robot' and a link 'Forgot password'. A blue 'Login' button is positioned below the password field. At the bottom of the white box, there is a link 'Not registered? Create account'. On the left side of the page, there are language selection options for 'Ελληνικά' and 'English', and a copyright notice 'AETMA © 2022'.

How to use the ARTutor Step 2



- To login click on the **Create** tab to create a book
- There are also other tabs available like **My Books**, **Public Book**, **Account** in which are shown the books you created!



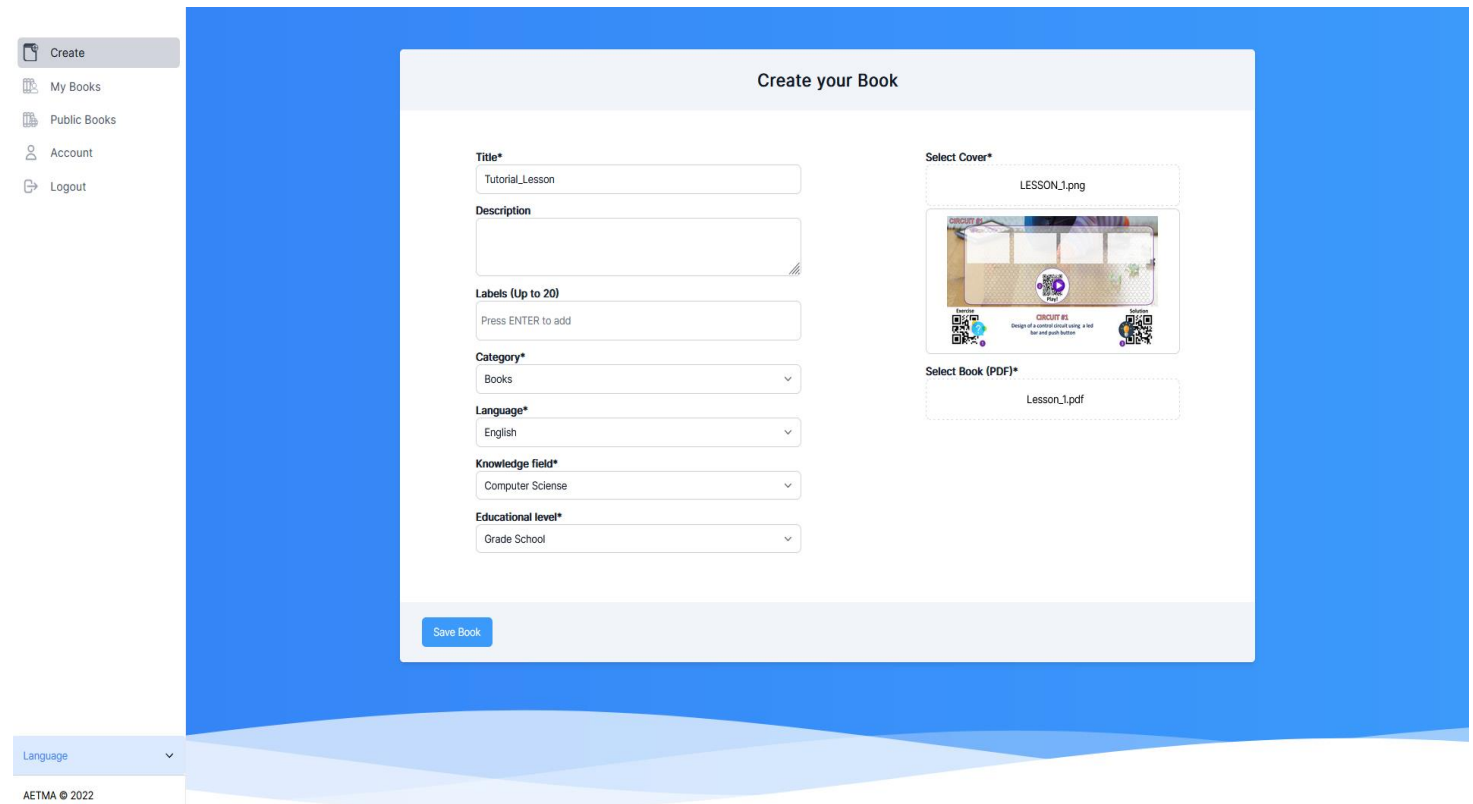
The screenshot shows the 'Create your Book' interface. On the left, a navigation menu includes 'Create' (selected), 'My Books', 'Public Books', 'Account', and 'Logout'. The main form contains the following fields:

- Title***: Text input with placeholder 'Insert title'.
- Description**: Text area with a bottom-right corner icon.
- Labels (Up to 20)**: Text input with placeholder 'Press ENTER to add'.
- Category***: Dropdown menu with 'Select Category'.
- Language***: Dropdown menu with 'Select Language'.
- Knowledge field***: Dropdown menu with 'Select knowledge field'.
- Educational level***: Dropdown menu with 'Select Educational level'.
- Select Cover***: File upload area with a dashed border, containing an upload icon and the text 'Drop file to upload, or [browse](#)'.
- Select Book (PDF)***: File upload area with a dashed border, containing an upload icon and the text 'Drop file to upload, or [browse](#)'.

A 'Save Book' button is located at the bottom of the form. At the bottom of the page, there is a 'Language' dropdown menu and the copyright notice 'AETMA © 2022'.



- After the login, fill all the required fields to create the book
- Last, click on the **Save Book** button



The screenshot shows the 'Create your Book' interface. On the left is a navigation menu with 'Create', 'My Books', 'Public Books', 'Account', and 'Logout'. The main form has the following fields:

- Title***: Tutorial_Lesson
- Description**: (Empty text area)
- Labels (Up to 20)**: Press ENTER to add
- Category***: Books
- Language***: English
- Knowledge field***: Computer Science
- Educational level***: Grade School

On the right side of the form:

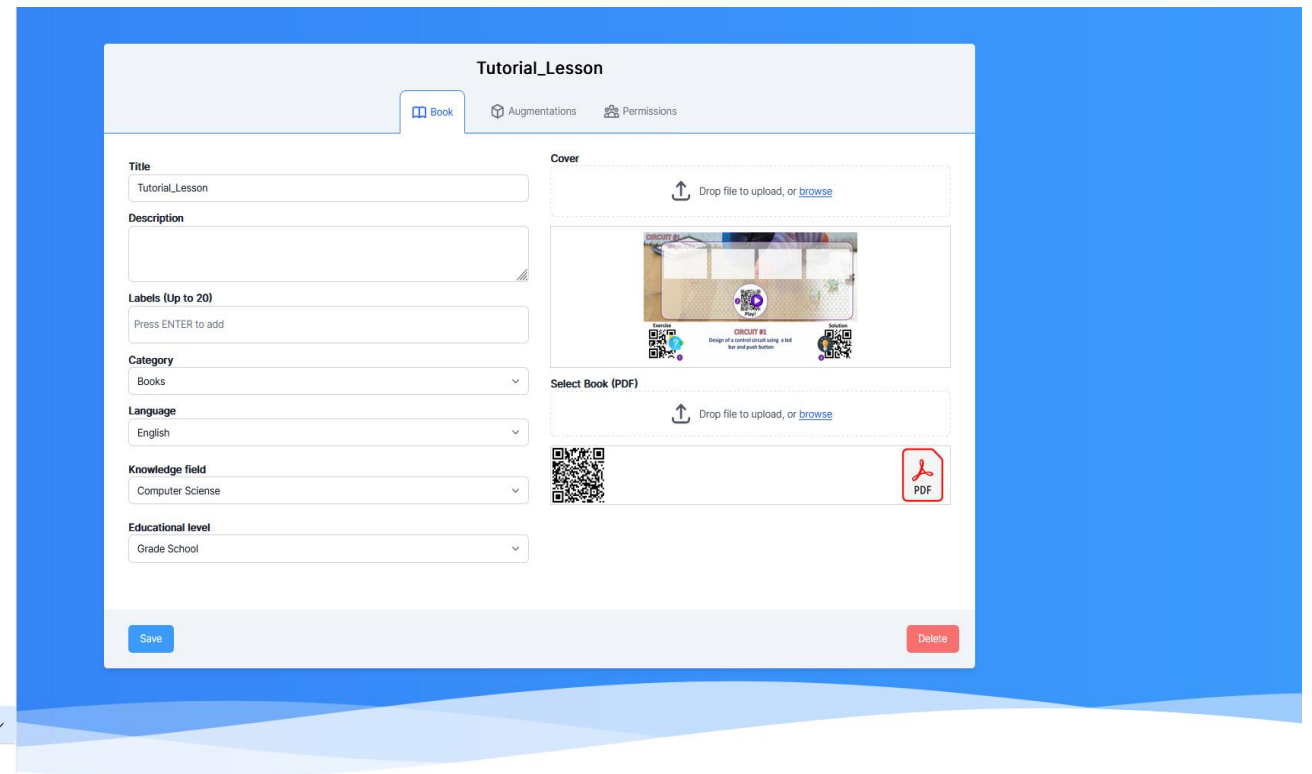
- Select Cover***: LESSON_1.png (with a preview image of a book cover)
- Select Book (PDF)***: Lesson_1.pdf

A 'Save Book' button is located at the bottom left of the form area. At the bottom of the page, there is a 'Language' dropdown menu and the copyright notice 'AETMA © 2022'.



- After creating the book three tabs are shown **Book**, **Augmentations** and **Permissions**
- The **Book** tab show the characteristics of our created book.

- Create
- My Books
- Public Books
- Account
- Logout



The screenshot shows the 'Tutorial_Lesson' book editing interface. The 'Book' tab is active, displaying a form with the following fields:

- Title:** Tutorial_Lesson
- Description:** (Empty text area)
- Labels (Up to 20):** (Text area with 'Press ENTER to add' prompt)
- Category:** Books
- Language:** English
- Knowledge field:** Computer Sciense
- Educational level:** Grade School

On the right side, there are two sections for cover and book selection:

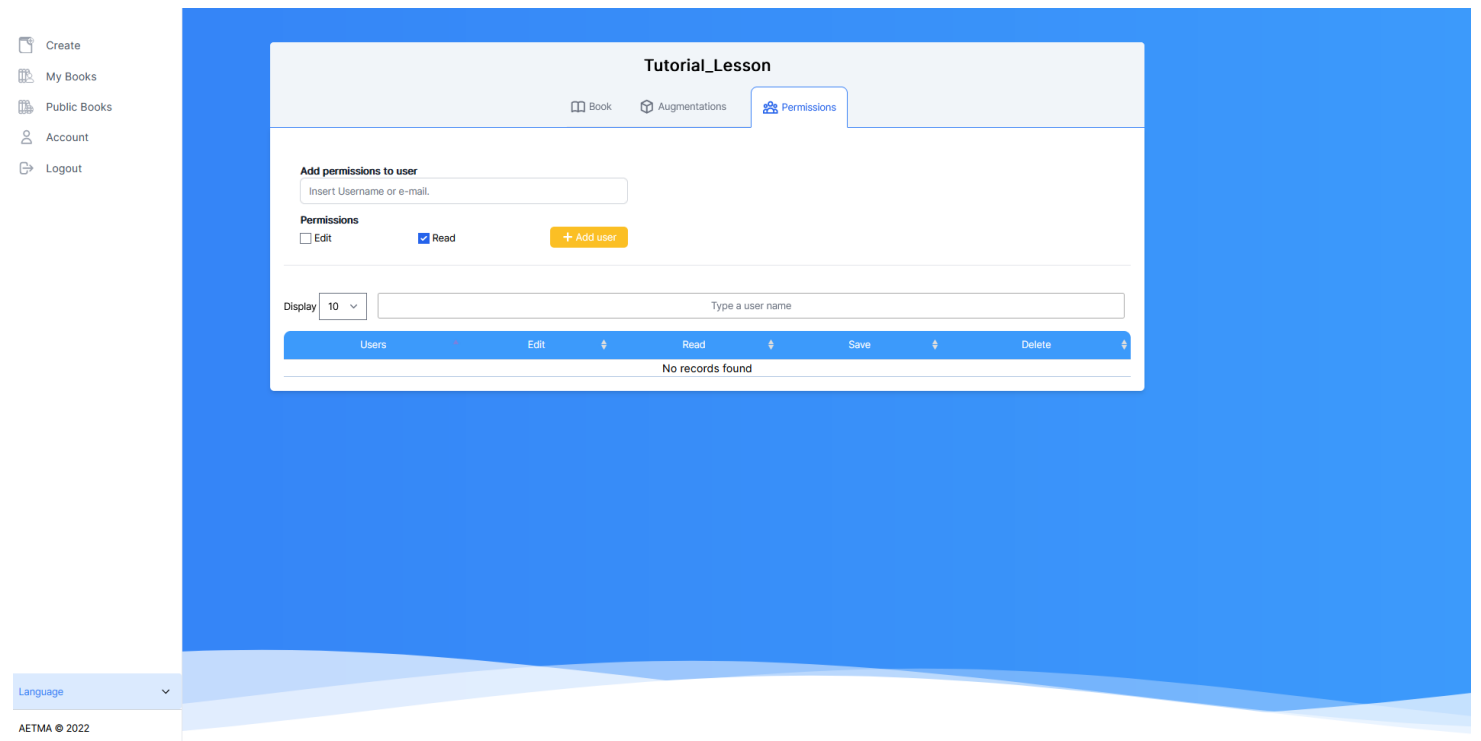
- Cover:** A dashed box with a 'Drop file to upload, or browse' prompt and a preview of a book cover.
- Select Book (PDF):** A dashed box with a 'Drop file to upload, or browse' prompt, a QR code, and a PDF icon.

At the bottom, there are 'Save' and 'Delete' buttons. A 'Language' dropdown menu is visible at the bottom left, and the footer shows 'AETMA © 2022'.

How to use the ARTutor Step 4



- The **Permissions** tab show the user which have access to the created book.
- In this tab the user can add other users.



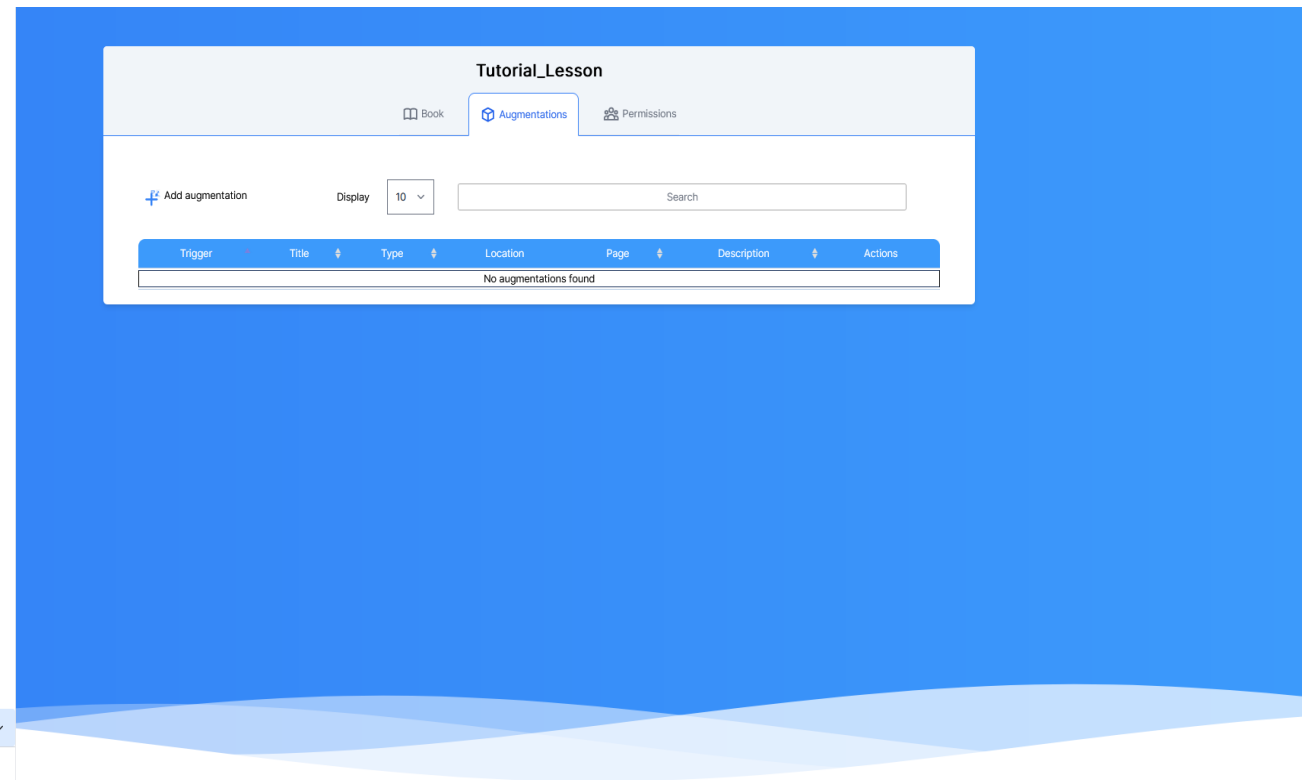
The screenshot displays the 'Tutorial_Lesson' interface with the 'Permissions' tab selected. On the left, a sidebar menu includes 'Create', 'My Books', 'Public Books', 'Account', and 'Logout'. The main content area features a search bar for 'Add permissions to user' with the placeholder 'Insert Username or e-mail.'. Below this, the 'Permissions' section has checkboxes for 'Edit' (unchecked) and 'Read' (checked), along with a '+ Add User' button. A 'Display' dropdown is set to '10', and a search input field contains 'Type a user name'. At the bottom, a table header shows columns for 'Users', 'Edit', 'Read', 'Save', and 'Delete', with a 'No records found' message below it. A 'Language' dropdown and 'AETMA © 2022' are visible at the bottom left of the interface.

How to use the ARTutor Step 4



- The **Augmentations** tab show the **Augmentations** of our created book.
- In this tab the user can add his own **Augmentations** by clicking on **Add augmentations**.

Create
My Books
Public Books
Account
Logout



Tutorial_Lesson

Book Augmentations Permissions

Add augmentation Display 10 Search

Trigger	Title	Type	Location	Page	Description	Actions
No augmentations found						

Language


AETMA © 2022

How to use the ARTutor Step 5

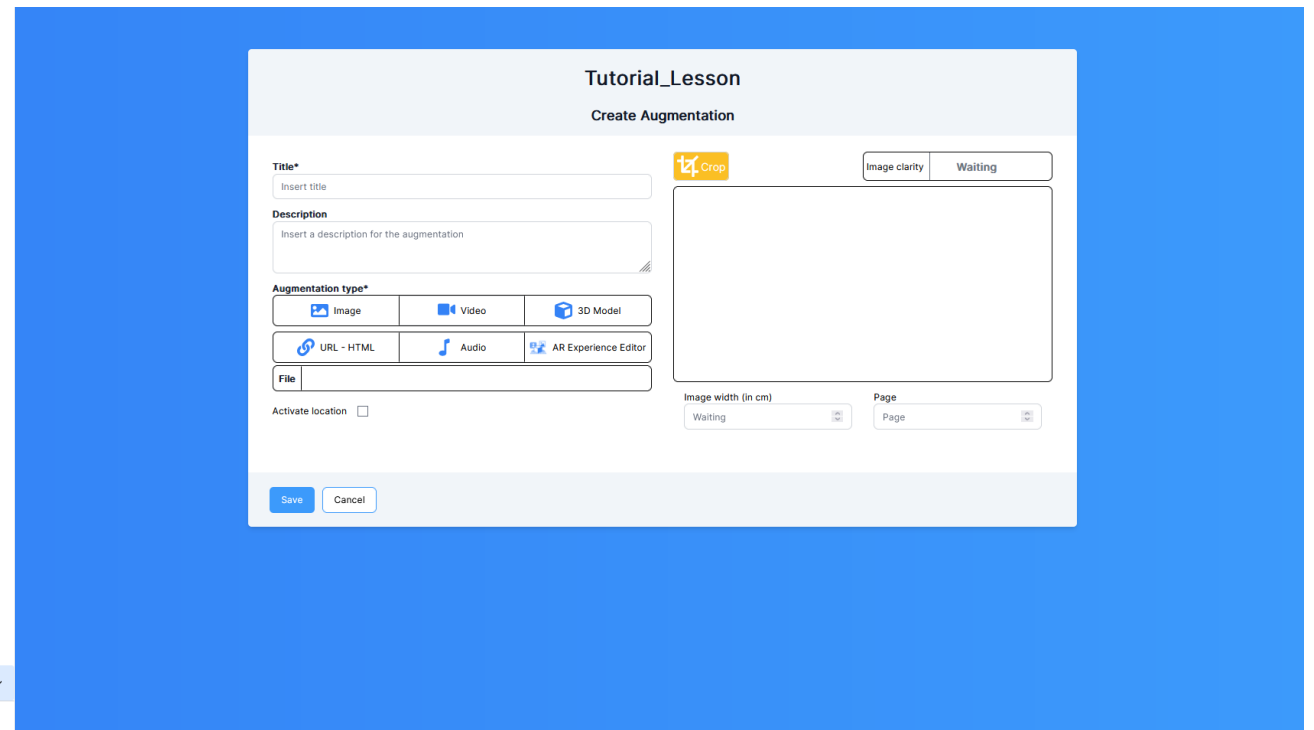


- After clicking on the **Add augmentations** button the panel provides many augmentation options for the user like.
 - Image
 - Video
 - 3D Model
 - URL-HTML
 - Audio
 - AR Experience Editor

- Create
- My Books
- Public Books
- Account
- Logout

Language 

AETMA © 2022



The screenshot shows a web interface for creating an augmentation. The title is 'Tutorial_Lesson' and the section is 'Create Augmentation'. It includes a 'Title*' field with a placeholder 'Insert title', a 'Description' field with a placeholder 'Insert a description for the augmentation', and an 'Augmentation type*' section with buttons for 'Image', 'Video', '3D Model', 'URL - HTML', 'Audio', and 'AR Experience Editor'. There is also a 'File' input field. On the right side, there is a large empty box for an image, with a 'Crop' button and 'Image clarity' and 'Waiting' labels. At the bottom, there are 'Image width (in cm)' and 'Page' fields, both with 'Waiting' labels. 'Save' and 'Cancel' buttons are at the bottom left.

How to use the ARTutor Step 6



- After filling all the required fields and choosing the type and after the file of augmentation, the user by clicking on the **Crop button** selects the region of the book which he wants to be augmented.

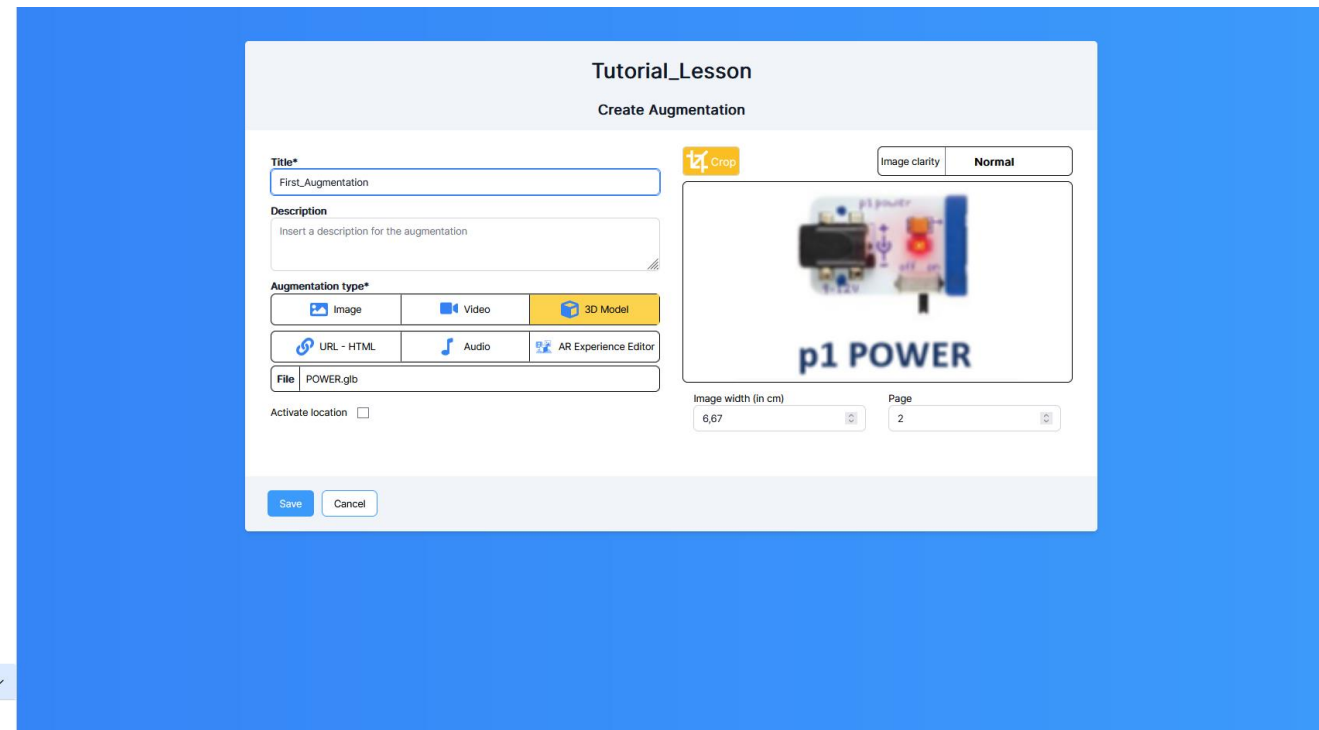


How to use the ARTutor Step 7



- After the selection region of the book which he wants to be augmented.
- The user can save the augmentation by clicking on the **Save** button.

Create
My Books
Public Books
Account
Logout



The screenshot shows the 'Tutorial_Lesson' interface for 'Create Augmentation'. It includes a sidebar with navigation options (Create, My Books, Public Books, Account, Logout) and a main form with the following fields and controls:

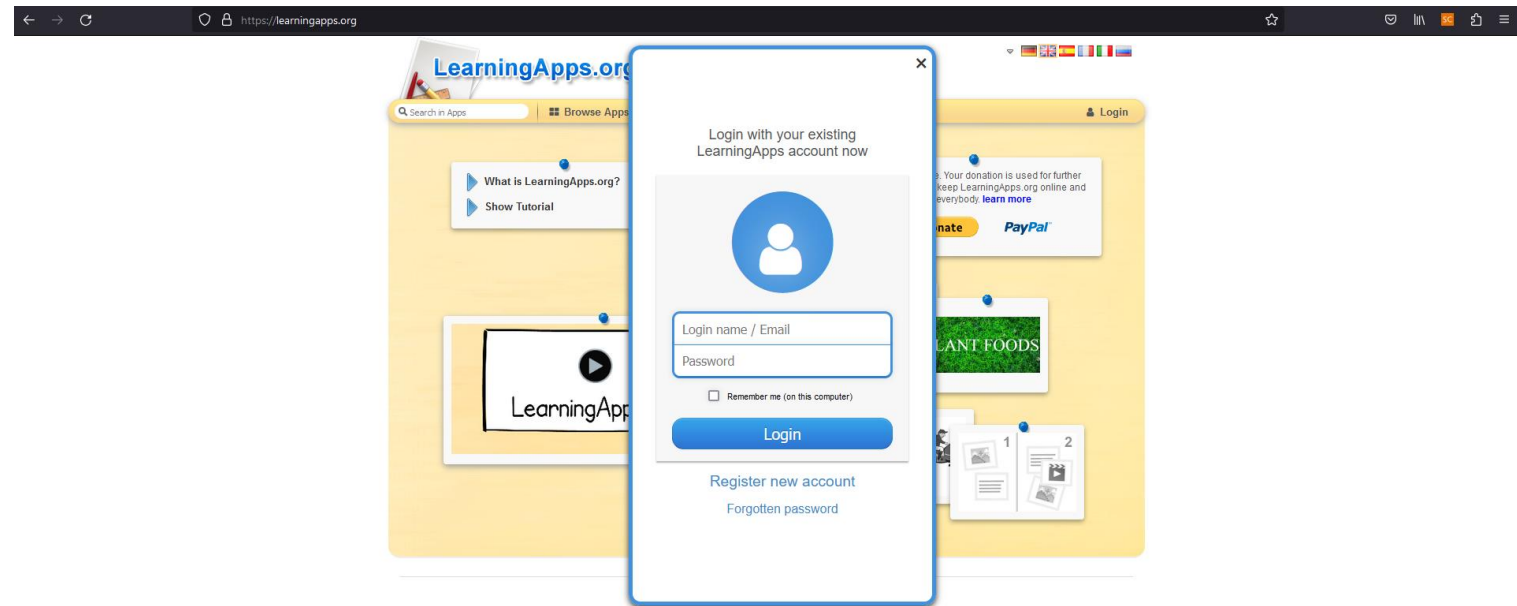
- Title***: Text input field containing 'First_Augmentation'.
- Description**: Text area with placeholder 'Insert a description for the augmentation'.
- Augmentation type***: Radio buttons for 'Image' (selected), 'Video', and '3D Model'.
- File**: Text input field containing 'POWER.glb'.
- Image clarity**: Dropdown menu set to 'Normal'.
- Image width (in cm)**: Input field with value '6,67'.
- Page**: Input field with value '2'.
- Activate location**: Unchecked checkbox.
- Buttons**: 'Save' and 'Cancel' buttons at the bottom.
- Preview**: A central window showing a 3D model of a circuit board with the text 'p1 POWER' overlaid.

Additional UI elements include a 'Language' dropdown menu and 'AETMA © 2022' copyright notice at the bottom.

Create an app with LearningApps



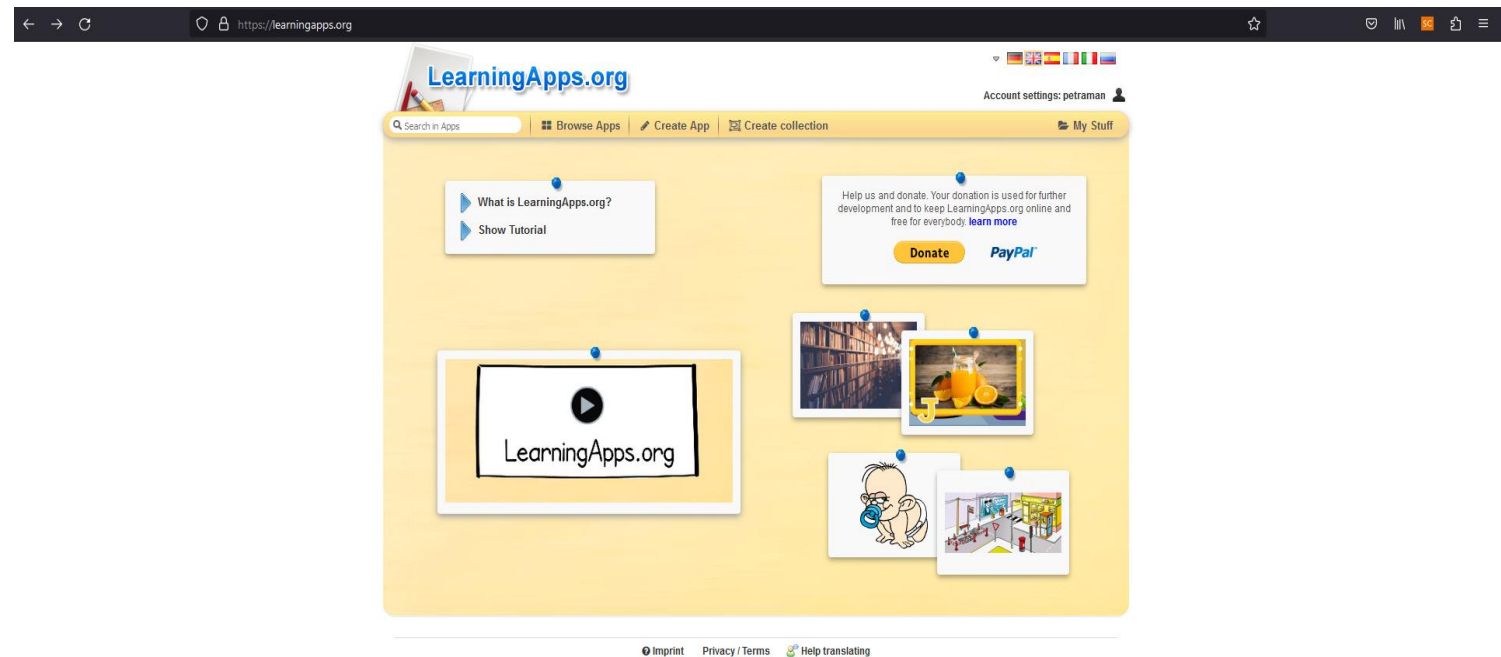
- Register for free or login if you have already registered on <https://learningapps.org/>.



Create an app with LearningApps



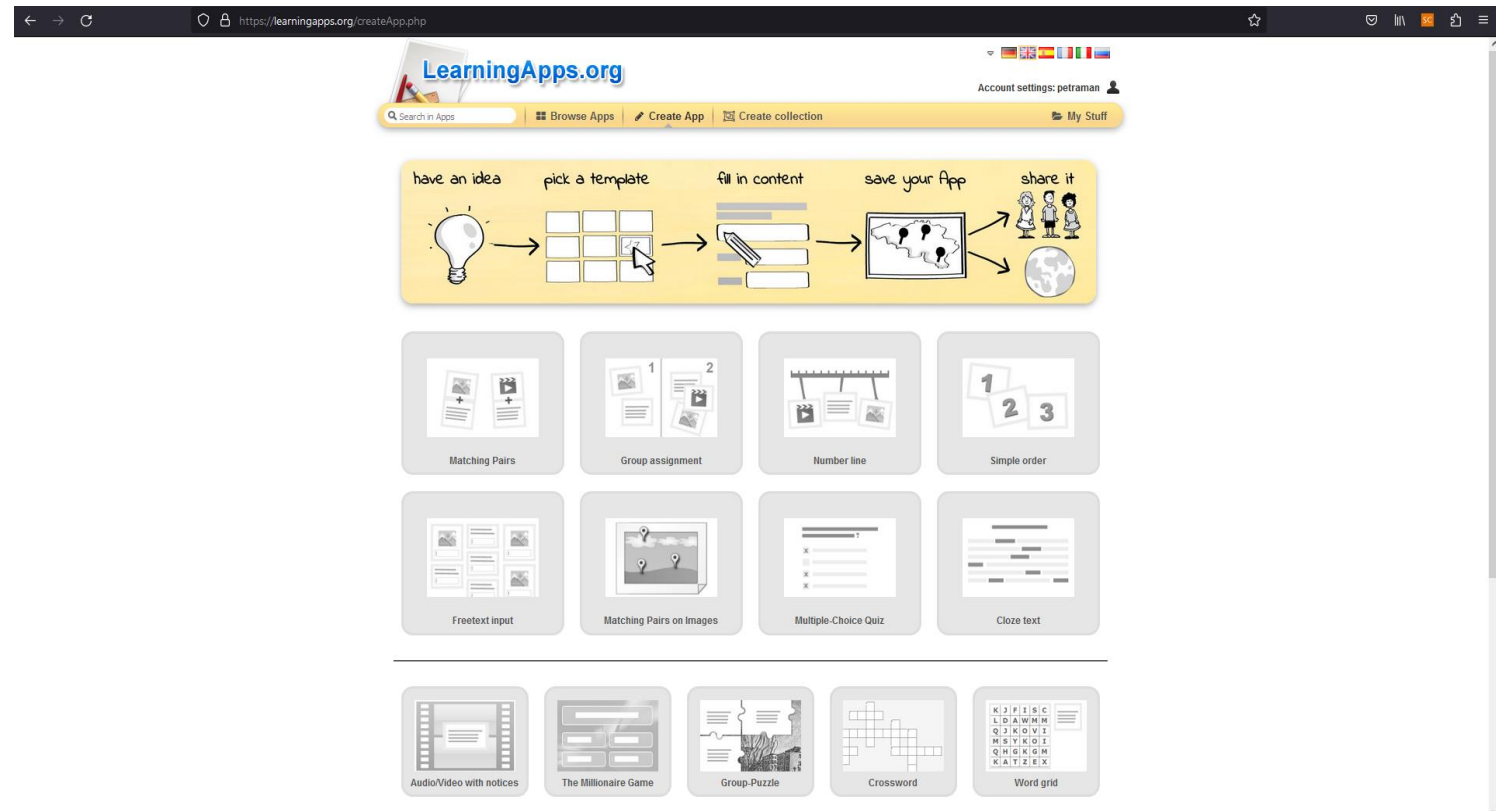
- After the login click on **create app** to make the app you prefer to use.



Create an app with LearningApps



- Choose app option you prefer to create. For example **Simple order**.

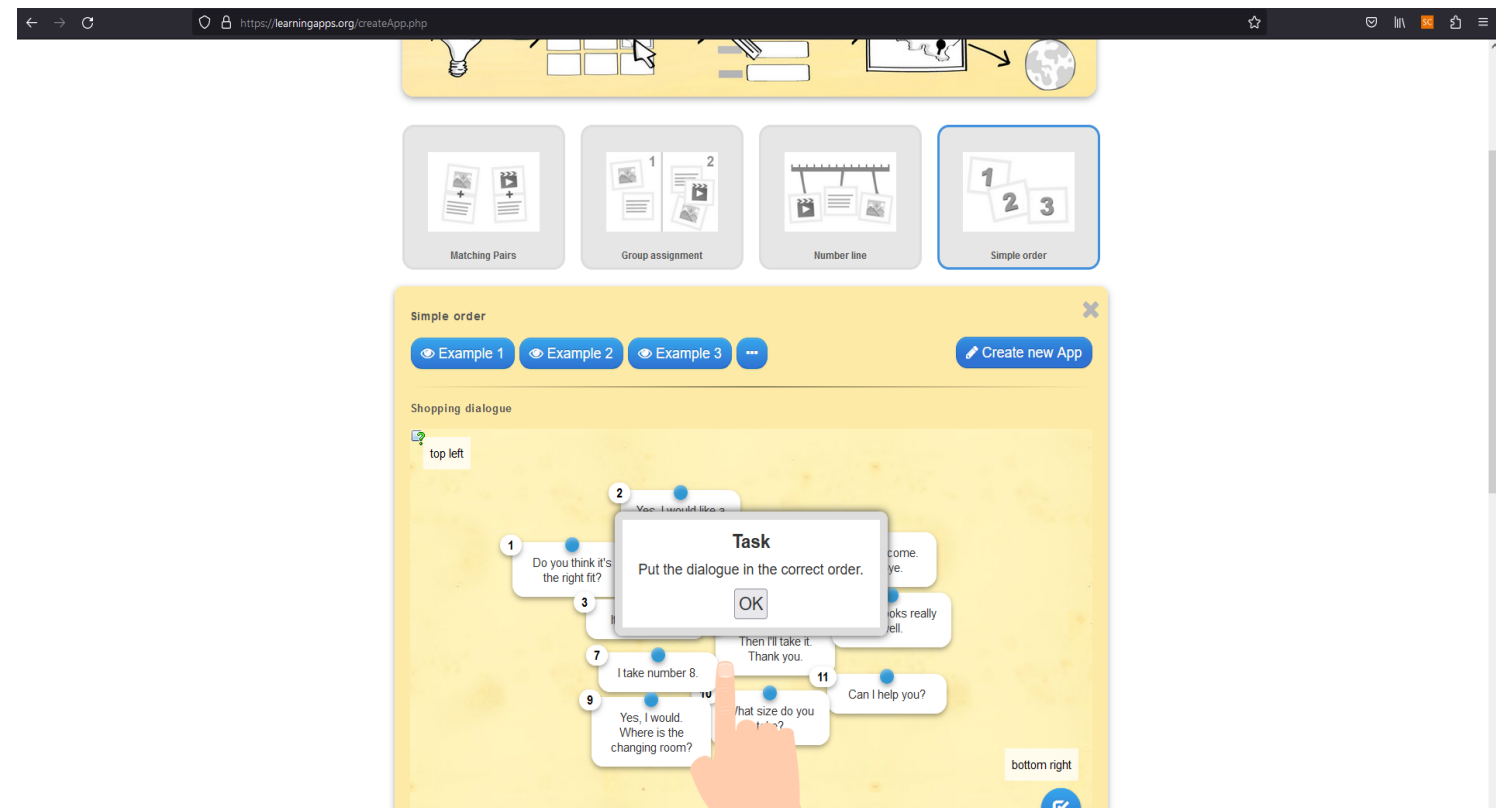


The screenshot shows the LearningApps.org website interface. At the top, there is a navigation bar with the LearningApps.org logo, account settings for 'petraman', and a search bar. Below the navigation bar, a yellow banner displays the five-step app creation process: 'have an idea' (lightbulb icon), 'pick a template' (grid icon), 'fill in content' (pencil icon), 'save your App' (map icon), and 'share it' (people icon). Below this banner, a grid of app templates is displayed, including Matching Pairs, Group assignment, Number line, Simple order, Freetext input, Matching Pairs on Images, Multiple-Choice Quiz, Cloze text, Audio/Video with notices, The Millionaire Game, Group-Puzzle, Crossword, and Word grid.

Create an app with LearningApps



- Click on **Create new App** to start making your app.

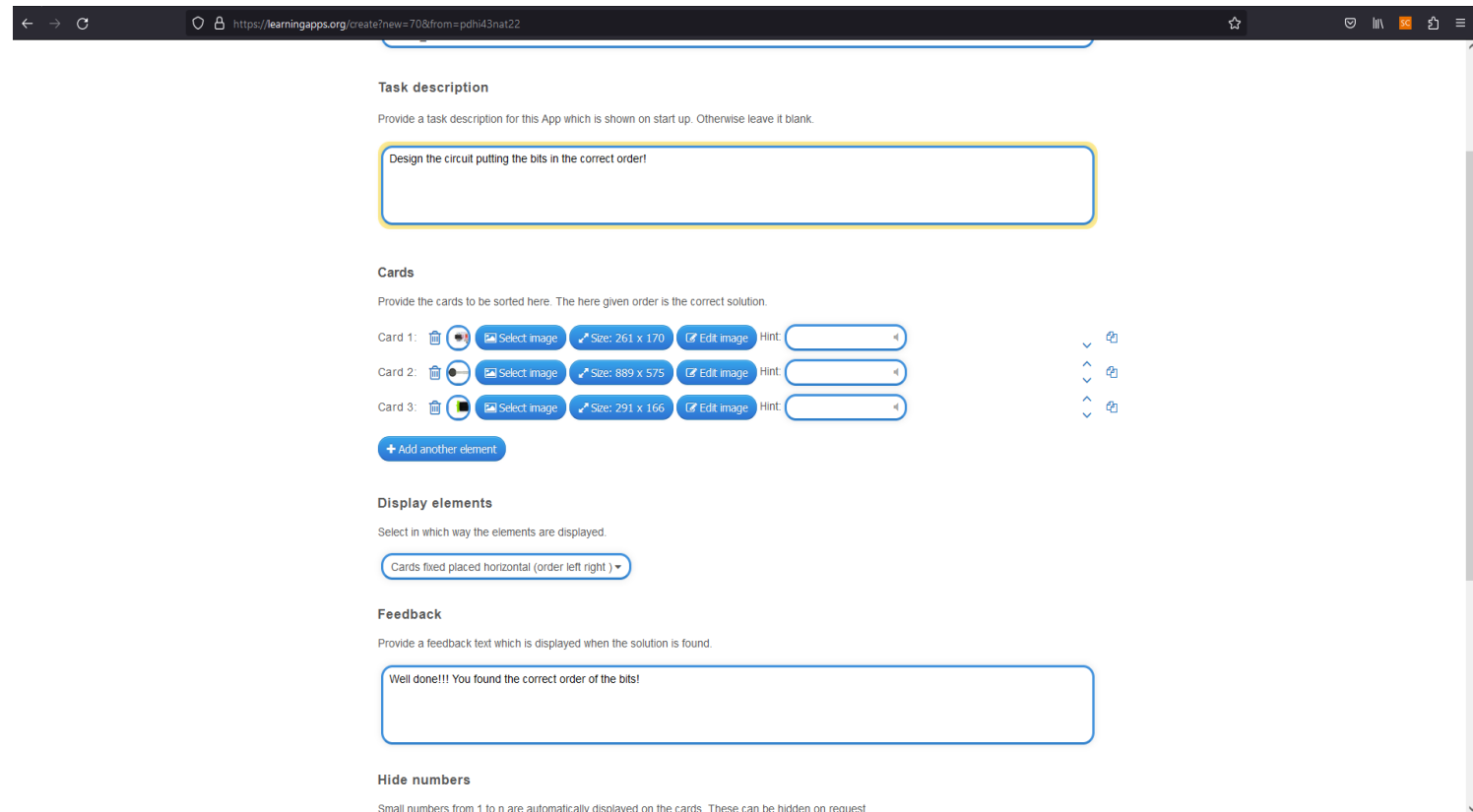


The screenshot shows the LearningApps website interface. At the top, there is a navigation bar with icons for home, search, and user profile. Below the navigation bar, there are four main categories of app templates: Matching Pairs, Group assignment, Number line, and Simple order. The 'Simple order' category is selected, and a preview of a 'Shopping dialogue' app is shown. The app preview features a yellow background with a shopping scene and a 'Task' dialog box that says 'Put the dialogue in the correct order.' The dialog box has an 'OK' button. The app preview also shows a 'Create new App' button in the top right corner.

Create an app with LearningApps



- Fill the field **Task Description** providing an analytic description of the task.



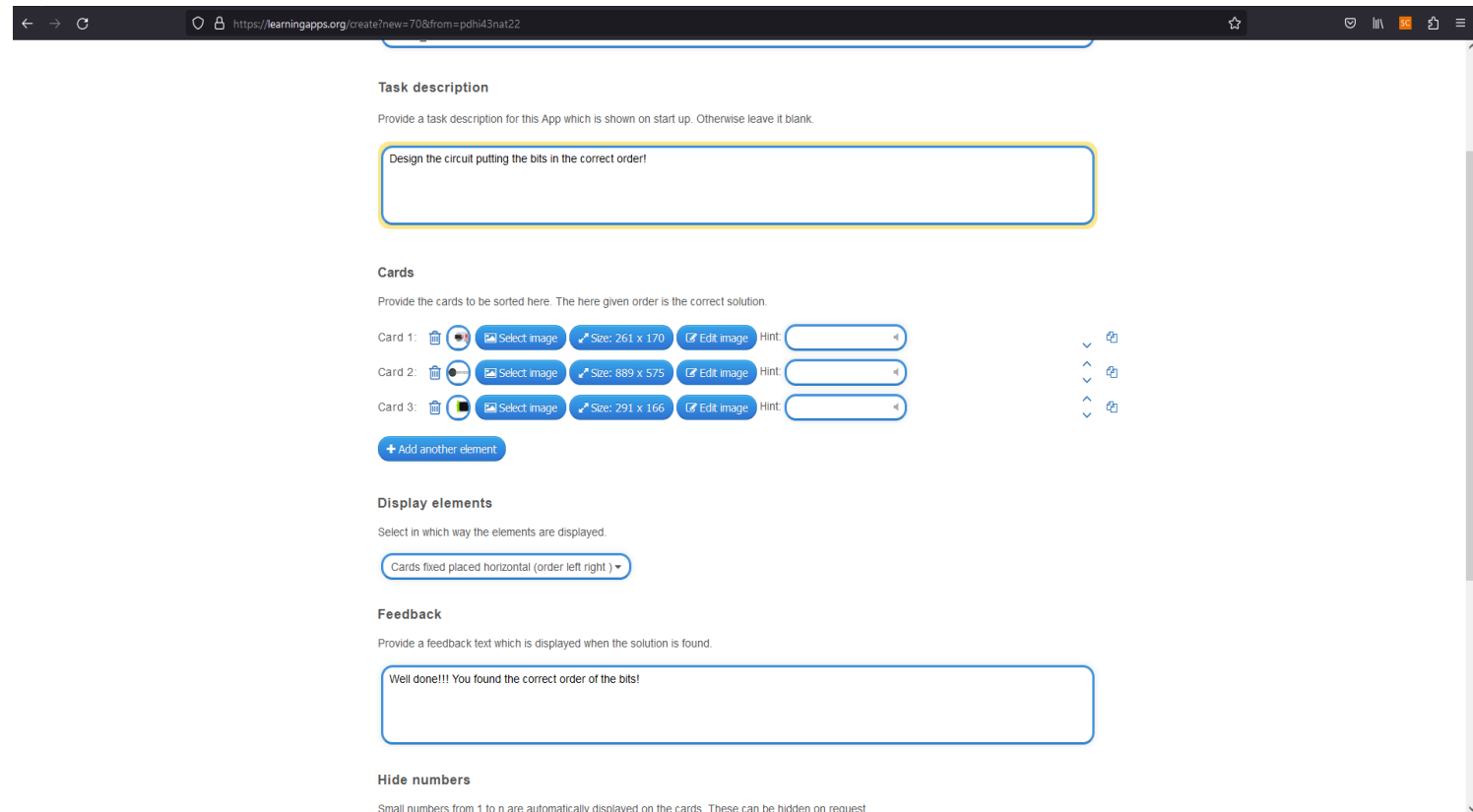
The screenshot shows the 'create' interface for a LearningApps.org application. The browser address bar displays <https://learningapps.org/create?new=70&from=pdh43nat22>. The interface is divided into several sections:

- Task description:** A text area containing the instruction "Design the circuit putting the bits in the correct order!".
- Cards:** A section for defining the task's cards. It includes three cards with the following details:
 - Card 1: Size: 261 x 170
 - Card 2: Size: 889 x 575
 - Card 3: Size: 291 x 166Each card has a "Select image" button, an "Edit image" button, and a "Hint" field. A "+ Add another element" button is located below the cards.
- Display elements:** A dropdown menu set to "Cards fixed placed horizontal (order left right)".
- Feedback:** A text area containing the message "Well done!!! You found the correct order of the bits!".
- Hide numbers:** A section with the text "Small numbers from 1 to n are automatically displayed on the cards. These can be hidden on request".

Create an app with LearningApps



- Fill the field **Task Description** providing an analytic description of the task.



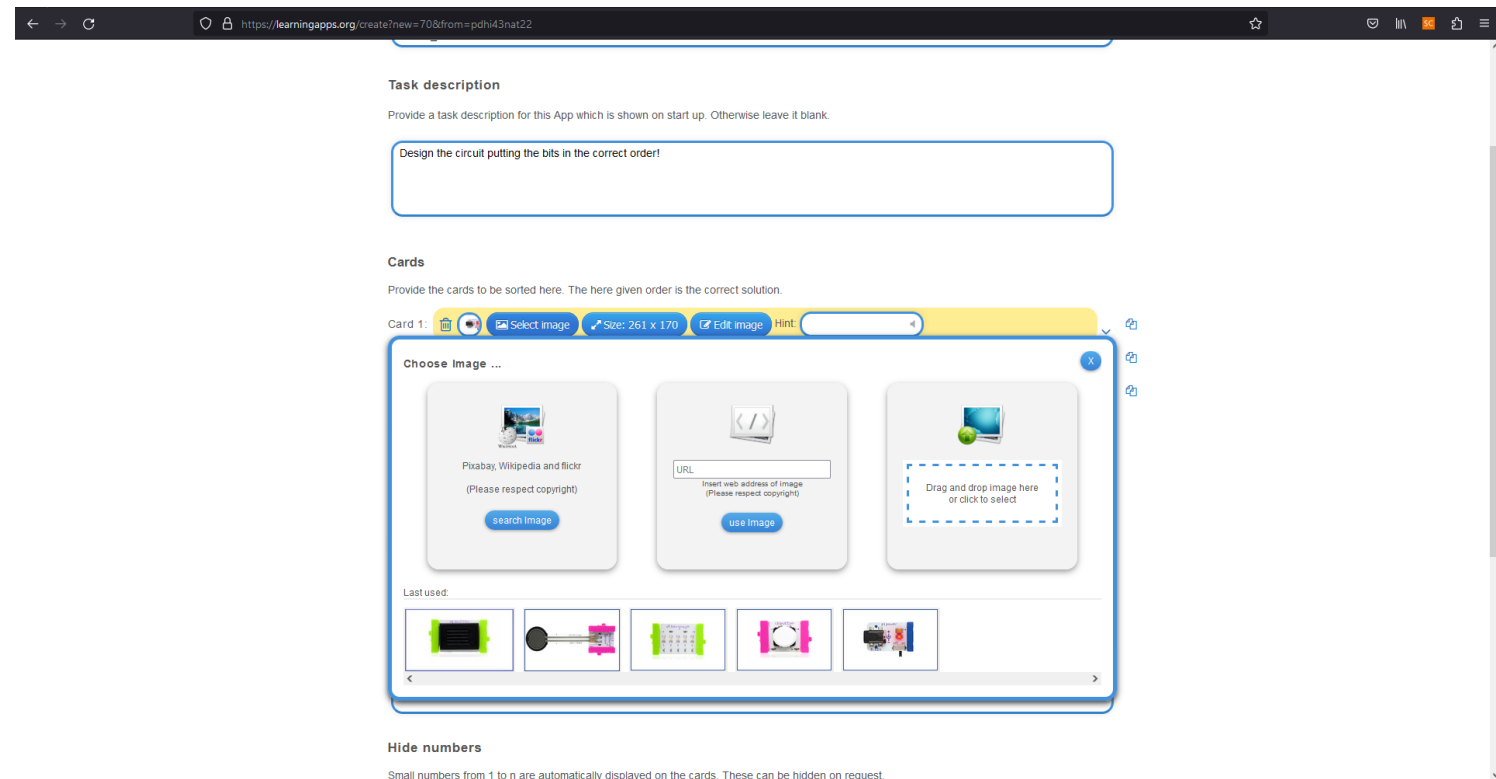
The screenshot shows the 'create' interface for LearningApps.org. The browser address bar displays <https://learningapps.org/create?new=70&from=pdh43nat22>. The interface is divided into several sections:

- Task description:** A text area containing the text "Design the circuit putting the bits in the correct order!".
- Cards:** A section for defining the task's cards. It includes three cards with the following details:
 - Card 1: Select image, Size: 261 x 170, Edit image, Hint: [empty]
 - Card 2: Select image, Size: 889 x 575, Edit image, Hint: [empty]
 - Card 3: Select image, Size: 291 x 166, Edit image, Hint: [empty]A "+ Add another element" button is located below the cards.
- Display elements:** A dropdown menu set to "Cards fixed placed horizontal (order left right)".
- Feedback:** A text area containing the text "Well done!!! You found the correct order of the bits!".
- Hide numbers:** A section with the text "Small numbers from 1 to n are automatically displayed on the cards. These can be hidden on request".

Create an app with LearningApps



- In the Cards field by clicking on the **Select image** button you can upload and process an image of the card.
- Three upload options are provided.

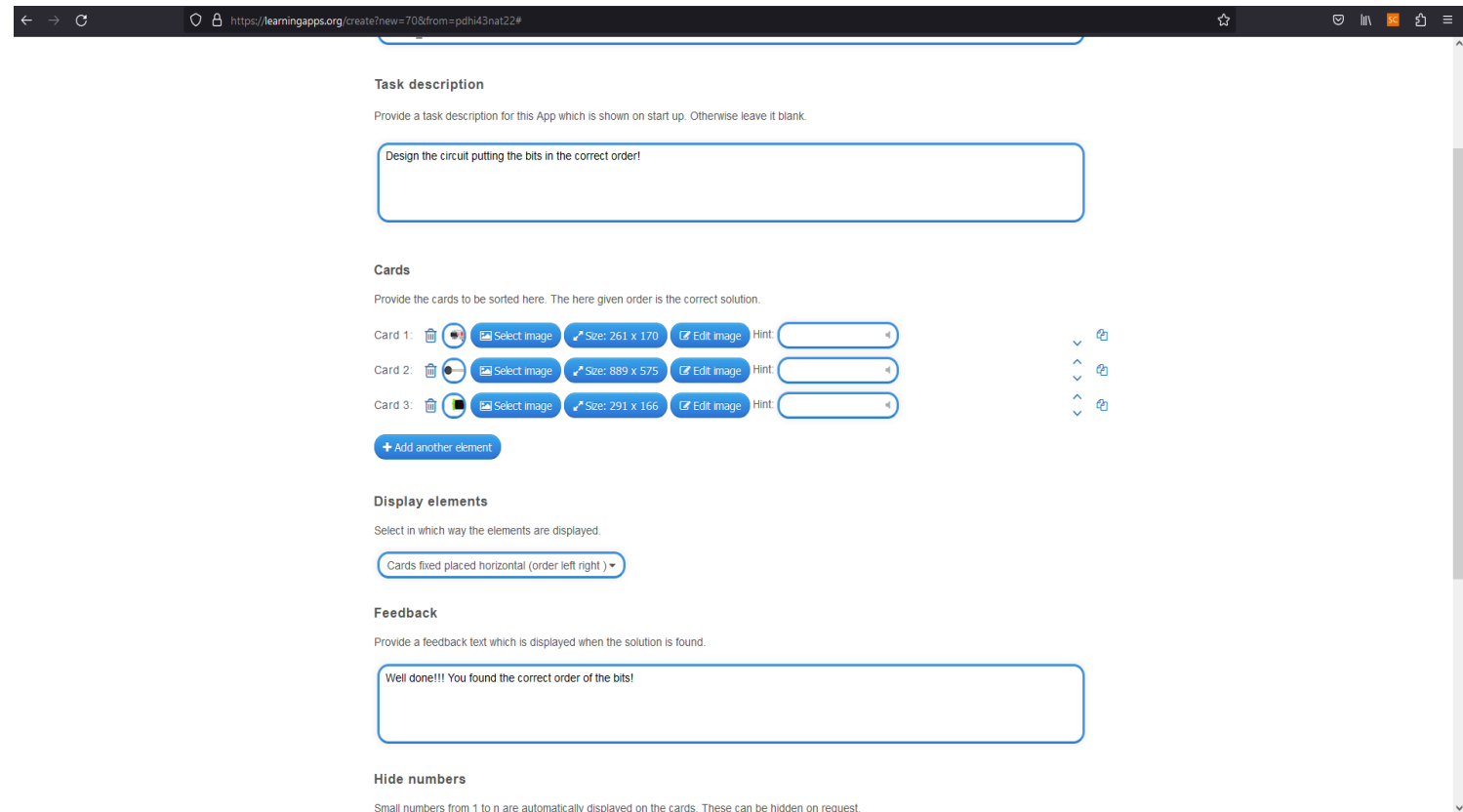


The screenshot shows the LearningApps.org 'Create' interface. The browser address bar displays <https://learningapps.org/create?new=70&from=pdhi43nat22>. The page is titled 'Task description' and contains a text box with the instruction: 'Design the circuit putting the bits in the correct order!'. Below this is the 'Cards' section, which includes a 'Choose Image ...' dialog box. This dialog box has three options: 'Search image' (with a search icon), 'Use Image' (with a URL input field), and 'Drag and drop image here or click to select' (with a dashed box). Below the dialog box is a 'Last used:' section showing a horizontal scrollable list of image thumbnails, including various electronic components like resistors, capacitors, and integrated circuits. At the bottom of the page, there is a 'Hide numbers' section with the text: 'Small numbers from 1 to n are automatically displayed on the cards. These can be hidden on request.'

Create an app with LearningApps



- Select display option on the Display elements field and add a feedback text on the feedback field.






Task description




Provide a task description for this App which is shown on start up. Otherwise leave it blank.




Design the circuit putting the bits in the correct order!

Cards

Provide the cards to be sorted here. The here given order is the correct solution.

Card 1:   Select image Size: 261 x 170  Edit image Hint:

Card 2:   Select image Size: 889 x 575  Edit image Hint:

Card 3:   Select image Size: 291 x 166  Edit image Hint:

+ Add another element

Display elements

Select in which way the elements are displayed.

Cards fixed placed horizontal (order left right)

Feedback

Provide a feedback text which is displayed when the solution is found.

Well done!!! You found the correct order of the bits!

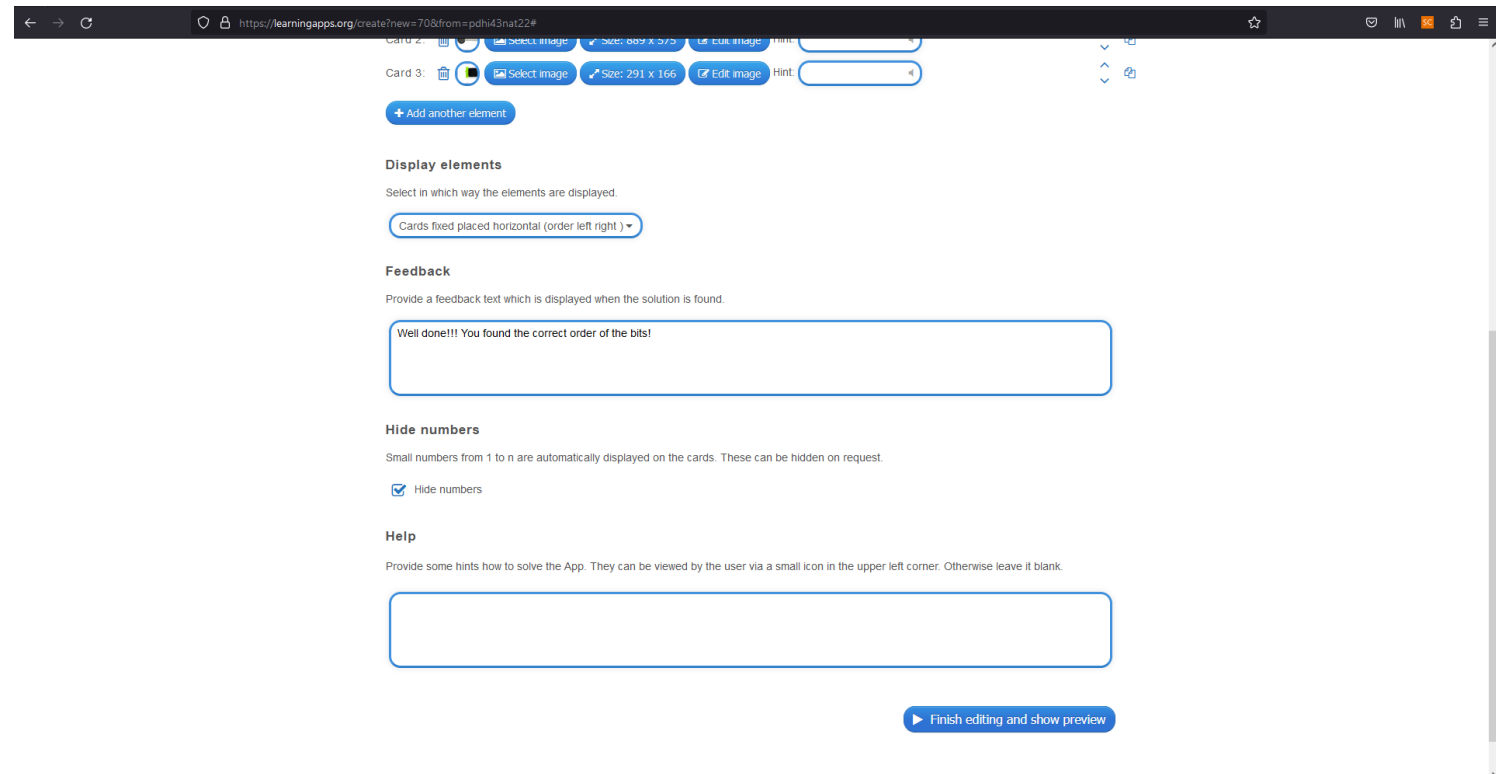
Hide numbers

Small numbers from 1 to n are automatically displayed on the cards. These can be hidden on request.

Create an app with LearningApps



- Click on the **Finish editing and show preview** button to finish the app you created.

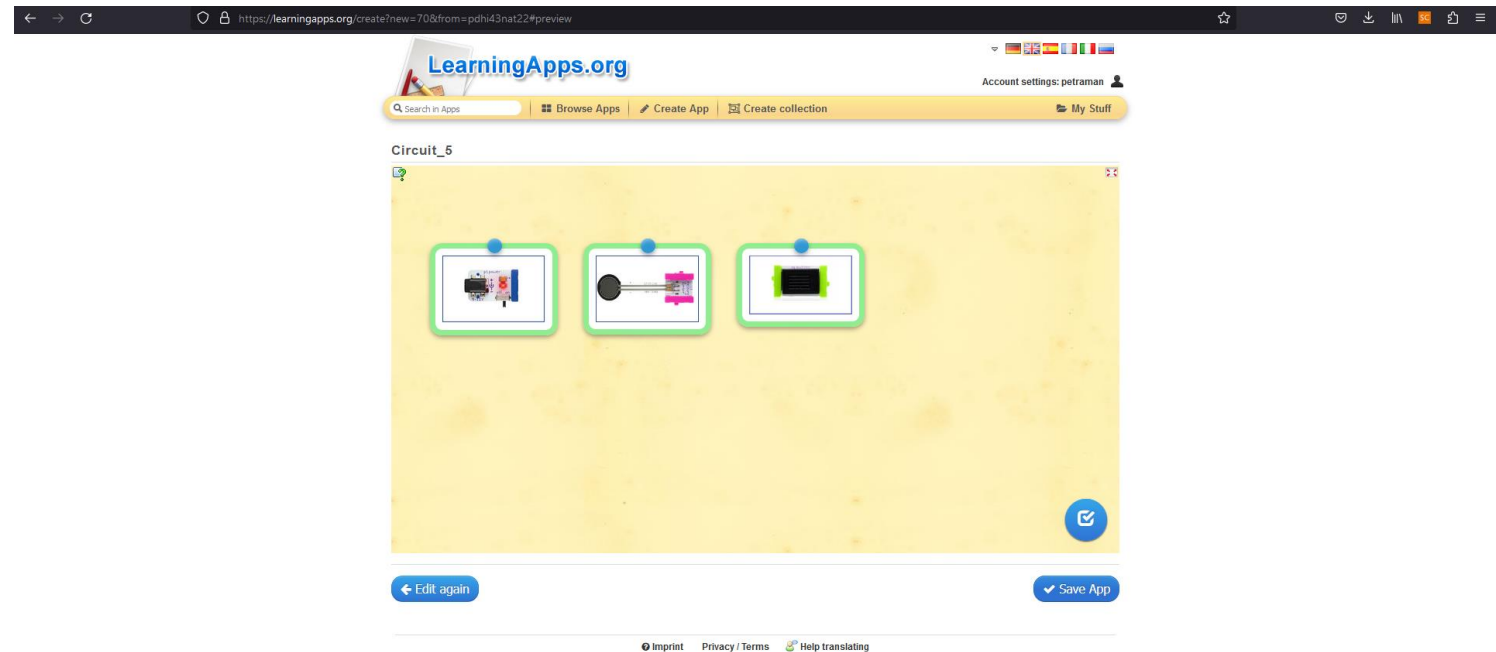


The screenshot shows the LearningApps editor interface. At the top, there are navigation buttons for 'Card 2' and 'Card 3', each with 'Select image', 'Size', and 'Edit image' options. Below these is a '+ Add another element' button. The 'Display elements' section has a dropdown menu set to 'Cards fixed placed horizontal (order left right)'. The 'Feedback' section has a text input field containing 'Well done!!! You found the correct order of the bits!'. The 'Hide numbers' section has a checked checkbox. The 'Help' section has a text input field. At the bottom right, there is a blue button labeled 'Finish editing and show preview'.

Create an app with LearningApps



- Lastly, you can test your app and, also save the app by clicking on the **Save app** button.



Create an app with LearningApps



- To share the app to other users, use the link or the QR code provided.



The screenshot shows the LearningApps.org website interface. At the top, there's a navigation bar with "Search in Apps", "Browse Apps", "Create App", and "Create collection". The main content area displays a preview of an app titled "Circuit_5" with three circuit diagrams. A notification bubble states: "Your app has been saved successfully. You can find it in your 'My Apps' page." Below the app preview, there are buttons for "Create similar App", "private App", "public App", and "Edit App". At the bottom, there's a "Use App" section with fields for "Link", "Embed", and "Share", each with a copy icon. A QR code is also visible next to the share field.