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## Introduction

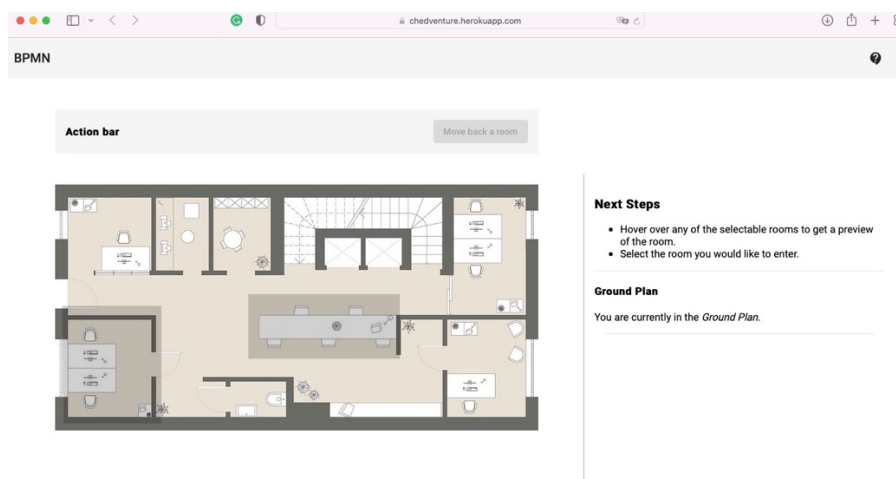
ChEdventure is a combination of a chatbot, education, and adventure simulation. ChEdventure aims to enable lecturers to provide students with realistic yet virtual consulting, coaching, or interview situations e.g., business process analysis, requirements engineering, business analysis, digitalization workshops or innovation management.

ChEdventure consists of two different parts: Firstly, it includes a simulation or game-like environment in which students are placed in to complete certain learning task. The second part is the ChEdventure designer. Here, lecturers can create new simulations with a high level of flexibility and creativity, specifically tailored to their use case and requirements.

### What is a ChEdventure simulation?

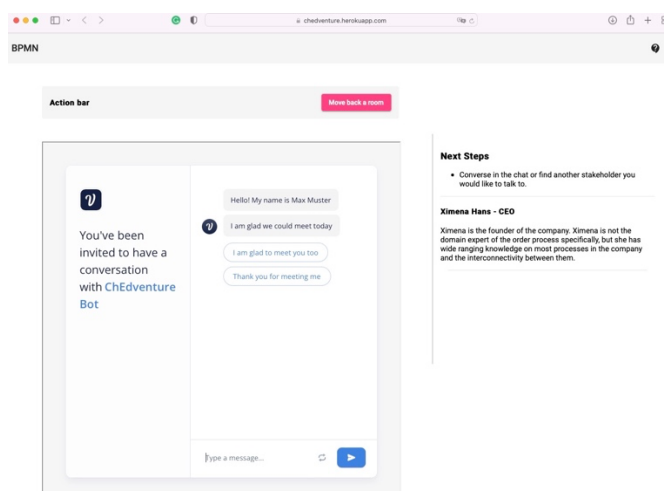
Generally, simulations consist of rooms (images with hitboxes), and characters (chatbots).

An example of a room:



Each room contains any number of clickable areas (hitboxes) to the player. Every one of these hitboxes has a target it leads to – either a room or a character (chatbot). Further information can be added to each room, such as instructions with which you as lecturer can guide the student, as well as a textual description of the room.

An example of a character:



The game design of ChEdventure is very flexible. It allows for unlimited nesting of rooms as well as the freedom to use any image for a room. This gives the game creator unlimited options when defining the setting of his simulation. For example, the simulation environment could be set within a hospital for training upcoming doctors their skill of interacting with patients (which are represented through the chatbot). Or, the setting of the simulation could take place in an office environment, where the student has to interact with different stakeholders of a fictitious company in order to first elicit (talking to various characters/chatbots of the company) and then improve that specific process and design it in a BPMN Diagram.

## ChEdventure designer

This documentation covers most aspects of the ChEdventure designer, including how you can create / edit your games.

### Create new game

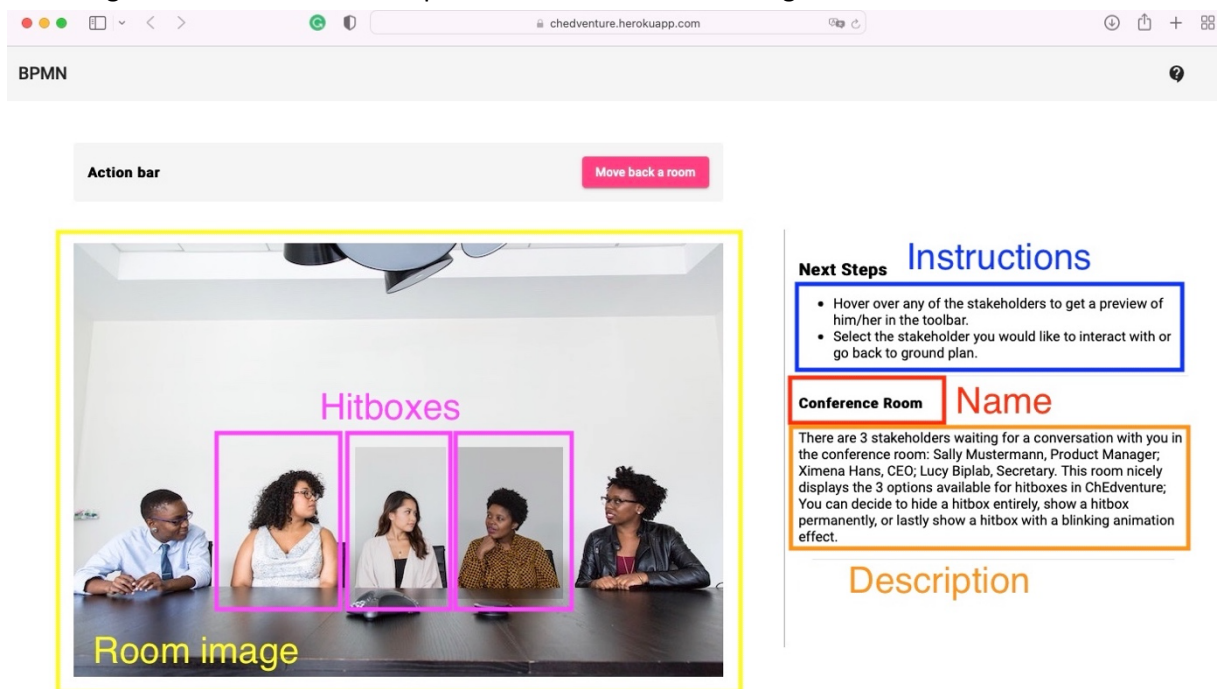
- Go to <https://chedventure.herokuapp.com>
- Go to the “My Games” page.
- You have to be logged-in and have an account (ask a ChEdventure administrators for an account if you do not have one)
- Click the top right button “New Game”.
- A dialog appears to enter initial game data. Only fields with a “\*” are mandatory.
- Click save once you filled out the required fields.
- After successfully creating a game, you are led to the first step of the set-up process. If you are happy with the game data you have previously entered you can move to the next step by clicking on the second step “Rooms and Characters” at the top center of the screen.

## Create rooms / Edit rooms / Configure new room / Configure room

- **WARNING:** Any changes you make to a room (selecting an image, configuring hitboxes, or defining a name, description or instructions) have to be saved by clicking the “Save room” button at the far bottom of the page. The button is visible once you have selected an image for your room.
- Go to the second step “Rooms & Characters” of the ChEdventure designer at the top center of the screen to edit or create new rooms.

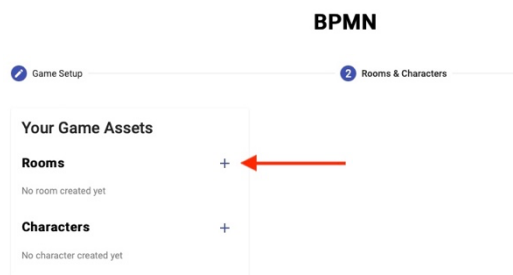
## Terminology of rooms in the ChEdventure designer

The following image depicts the terminology you will see in the ChEdventure designer when creating or editing a room and how these input fields translate within the game.



## Create new rooms

- To create a new room, click on the plus icon in the left side bar.

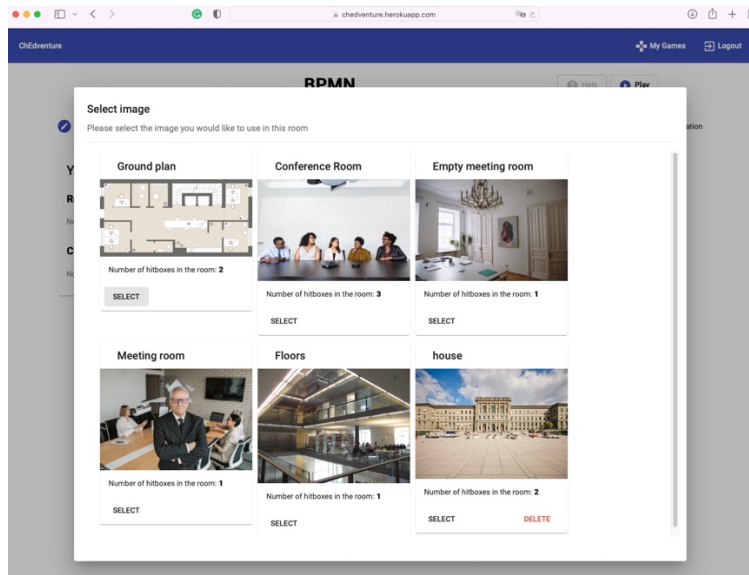


- New buttons appear now to the right – “Select image” & “Upload custom image”. These two options allow you to set the image in your room.

## Select image

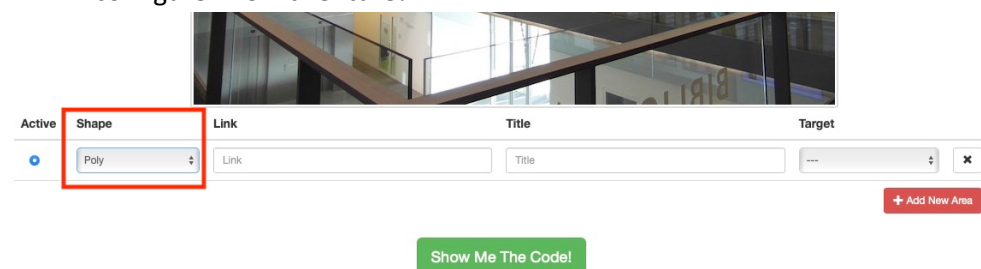
- Use this option if you want to select one of the images which ChEdventure offers you from the get-go.

- A new dialog appears with a list of images. With each entry you see a preview of the image as well as the number of available hitboxes in that image.
- Select the image you would like to use in your room.
- You are returned to the configure page of your room. Go to the bottom of the page and click on “Save room” to save your selection of image.



### Upload custom image

- Use this option if you want to use a custom image in your room.
1. Define a name for the image.
  2. Upload an image from your pc. The image must have the following properties
    - a. The **width** of the image must **PRECISELY** be **750px**.
    - b. The **height** of the image **cannot exceed 750 px** (it can be smaller)
    - c. You can find instructions (Windows & Mac) **how to resize your image** to have a width of 750px here: <https://www.drivereasy.com/knowledge/how-to-resize-an-image-on-windows/>
  3. Now, you can define the available hitboxes in your image. A hitbox consists of any number of coordinates on the image. These coordinates have to be entered comma separated. You can draw the hitboxes without much hustle and retrieve the coordinates with the following tool:  
Open: <https://www.image-map.net>
    - a. Click “Select Image from My PC” to upload your image
    - b. Next, **choose the option “Poly”** under the column “Shape” just below your uploaded image. Please note that if the option “Rect” is selected the hitboxes will not correctly configure in ChEdventure!



- c. Now, you can freely define an area on the image by clicking within the image.

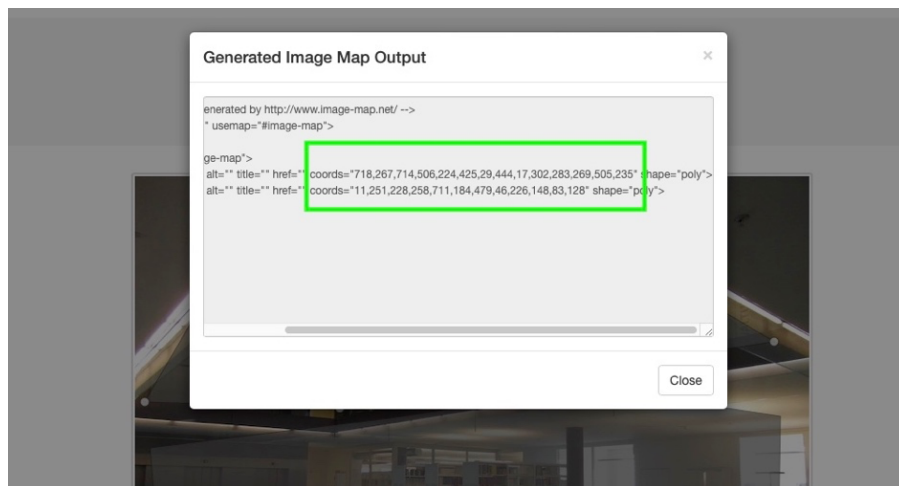
- d. You can add as many areas as you wish by clicking on the “Add New Area” button

Active	Shape	Link	Title	Target
<input type="radio"/>	Poly	Link	Title	---
<input checked="" type="radio"/>	Poly	Link	Title	---

[+ Add New Area](#)

[Show Me The Code!](#)

- e. Once you are happy with the defined areas, click “Show Me The Code!” to retrieve the coordinates of each area:



- f. Copy the coordinates of the first area and paste it in ChEdventure to the input field hitbox. You can add new hitboxes in ChEdventure by clicking the “Add hitbox” button & repeat for each area you defined!

**Upload image**

You can upload an image and define the hitboxes by entering the coordinates. Please make sure your image has an exact width of 750px and a max-height of 750px. We recommend you to use the following website to draw hitboxes on your image & retrieve the coordinates: "https://www.image-map.net".

Name \*

FHNW Building

Datei auswählen -1.jpeg

**Hitboxes**

1. Hitbox, enter comma-separated coordinates. Such as: 100,454,83,404,109,406,126,433

718,267,714,506,224,425,29,444,17,302,283,269,505,235

2. Hitbox, enter comma-separated coordinates. Such as: 100,454,83,404,109,406,126,433

[Add hitbox](#)

[Save image](#)

4. Save the image & wait for a success message to appear.
  - a. You can now select your custom image in any room you create. You also have the possibility to delete your custom images under the “Select image” button.
5. You are returned to configure your room. Click on “Save room” at the far bottom of the page to save your selection of custom image.

## Room Name & Room Description

- Now, you can set a name and optionally a description for your room. Lookup chapter “Terminology of rooms in the ChEdventure designer” in this manual to see where these informations are shown to the player.
- Click on “Save room” at the far bottom of the page to save your changes.

## Room instructions

- Instructions allow you to give direction or clues to the player. Lookup chapter “Terminology of rooms in the ChEdventure designer” in this manual to see where & how the instructions are displayed to the player.
- You can remove instructions with the minus icon on the far right, and add new instructions with the “add instructions” button.
- Click on “Save room” at the far bottom of the page to save your changes.

## Configure hitboxes in room

- All available hitboxes in your chosen image are displayed under each other in the “configure hitboxes in room” section. For each hitbox:
- By clicking the “**activate**” checkbox, you activate the hitbox in your simulation.
- By clicking the radio-button “**Highlight in image**”, the hitbox will be highlighted in red in the image right at the bottom of the page. This function allows you to see which hitbox you are currently editing.

### Configure hitboxes in room

**1. Hitbox**

☒ Activate ☐ Highlight in image

Target room  — OR — Target character

☐ Display hitbox ☐ Animate hitbox with blinking effect

**2. Hitbox**

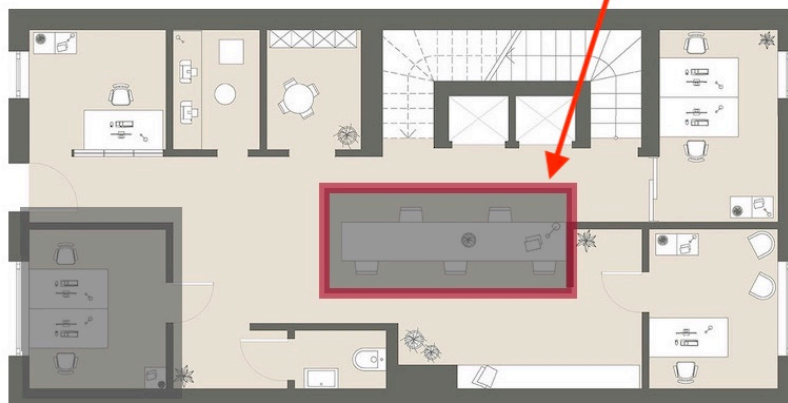
☒ Activate ☒ Highlight in image

Target room  — OR — Target character

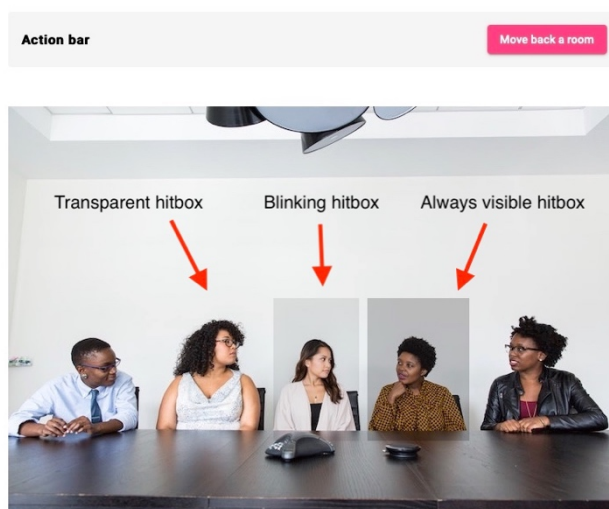
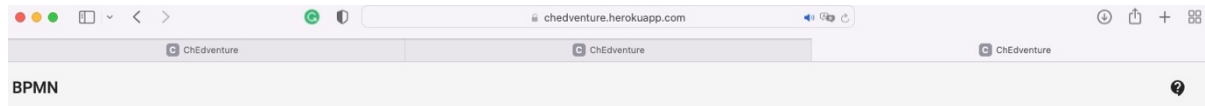
☒ Display hitbox ☒ Animate hitbox with blinking effect

Save room

### Image of *Ground plan* with all available hitboxes



- Next you can define a **target room** or **target character** (only one option allowed). Please note that if this is your first room or you have not defined any characters you cannot select any targets. You will have to return and select a target once you have created further game assets.
- You have three options on how you like to display hitboxes to the user, transparent, always visible, or blinking:
  - Checking the **Display hitbox** checkbox makes the hitbox visible to the player in the game.
  - Checking the **Animate hitbox with blinking effect** will in addition make the hitbox “blink” (display hitbox has to be activated).



#### Next Steps

- Hover over any of the stakeholders to get a preview of him/her in the toolbar.
- Select the stakeholder you would like to interact with or go back to ground plan.

#### Conference Room

There are 3 stakeholders waiting for a conversation with you in the conference room: Sally Mustermann, Product Manager; Ximena Hans, CEO; Lucy Biplab, Secretary. This room nicely displays the 3 options available for hitboxes in ChEdventure; You can decide to hide a hitbox entirely, show a hitbox permanently, or lastly show a hitbox with a blinking animation effect.

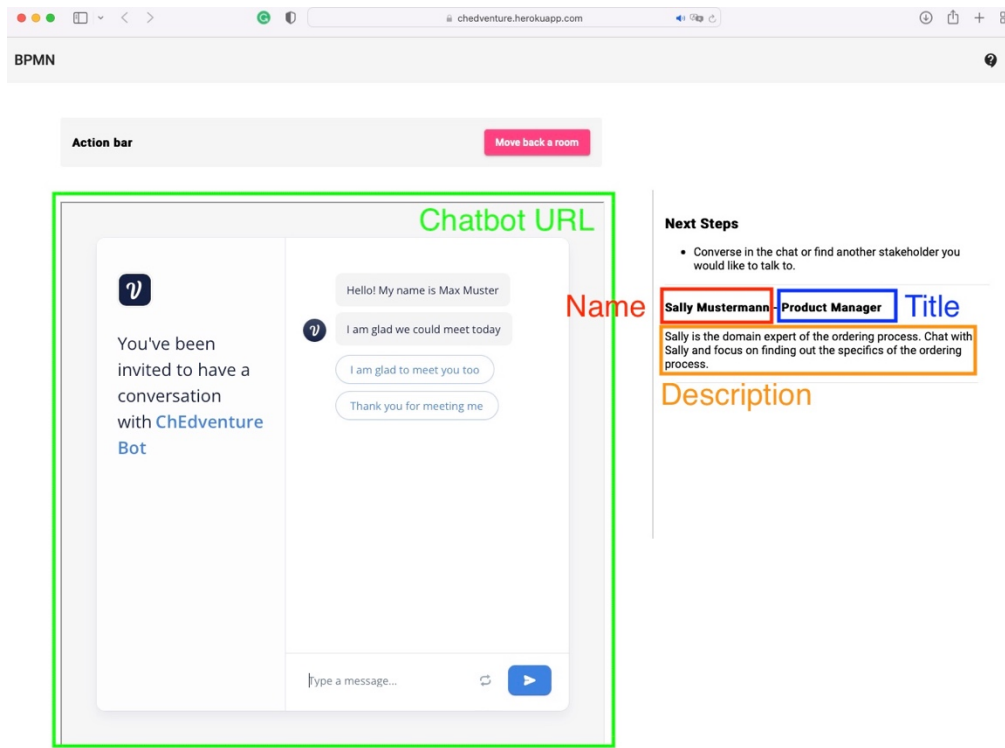
- Click on “Save room” at the far bottom of the page to save your changes.



Create characters / Edit characters / Configure new character / Configure character

Terminology of characters in the ChEdventure designer

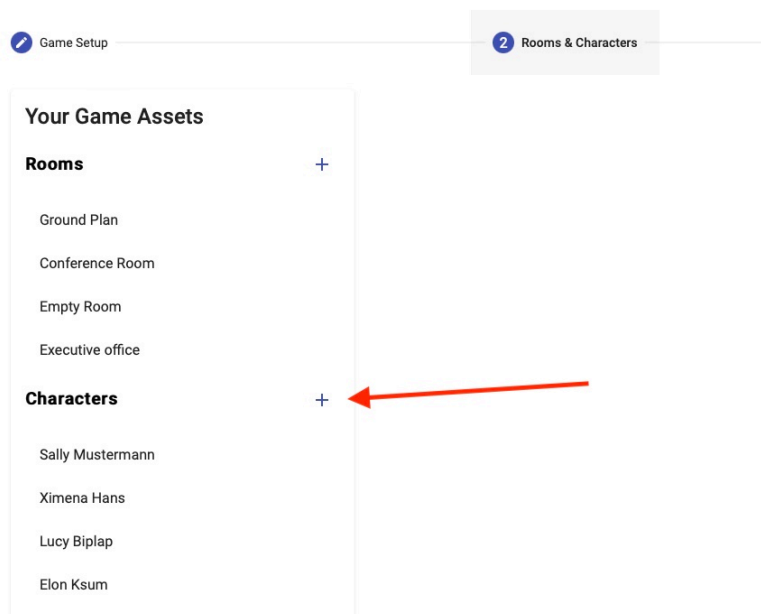
The following image depicts the terminology you will see in the ChEdventure designer when creating or editing characters and how these input fields translate within the game.



Create character / Edit character

- To create a new character, click on the plus icon in the left side bar.

## BPMN



- Now, you can set a name, optionally a title, and optionally a description. Lookup chapter "Terminology of characters in the ChEdventure designer" in this manual to see where these informations are shown to the player.

- At the input field “Chatbot URL” you can choose to either use the provided dummy chatbot or alternatively setup your own chatbot and paste the URL Link to the input field.
- Click on “Save” button to save your changes.
- You can now target your character in one of your rooms.

The screenshot shows the ChEdventure web application interface. The top navigation bar includes the ChEdventure logo, 'My Games', and 'Logout' links. The main header is 'BPMN' with 'Help' and 'Play' buttons. A progress bar at the top indicates three steps: 'Game Setup', 'Rooms & Characters' (current step), and 'Final Configuration'.

The 'Rooms & Characters' section is divided into two main areas:

- Your Game Assets:** A sidebar on the left containing two sections:
  - Rooms:** A list with a '+' icon, containing 'Ground Plan', 'Conference Room', 'Empty Room', and 'Executive office'.
  - Characters:** A list with a '+' icon, containing 'Sally Mustermann', 'Ximena Hans' (highlighted), 'Lucy Biplap', and 'Elon Ksum'.
- Configure character:** A form on the right for configuring the selected character, 'Ximena Hans'.
  - Name:** Ximena Hans
  - Title:** CEO
  - Description:** A text area containing: 'Ximena is the founder of the company. Ximena is not the domain expert of the order process specifically, but she has wide ranging knowledge on most processes in the company and the interconnectivity between them.'
  - Optional Description:** A text area for an optional description of the character.
  - Use dummy chatbot:** A checked checkbox.
  - Chatbot URL:** A text field containing 'https://creator.voiceflow.com/prototype/626abdde3e2ab5c39626f392'.
  - Buttons:** 'Save' and 'Delete' buttons.

## Final Configurations

The screenshot shows the 'Final Configuration' step of the ChEdventure web application. The progress bar at the top indicates three steps: 'Game Setup', 'Rooms & Characters', and 'Final Configuration' (current step).

The 'Final Configuration' section is titled 'Final configuration of your game' and includes the following fields and options:

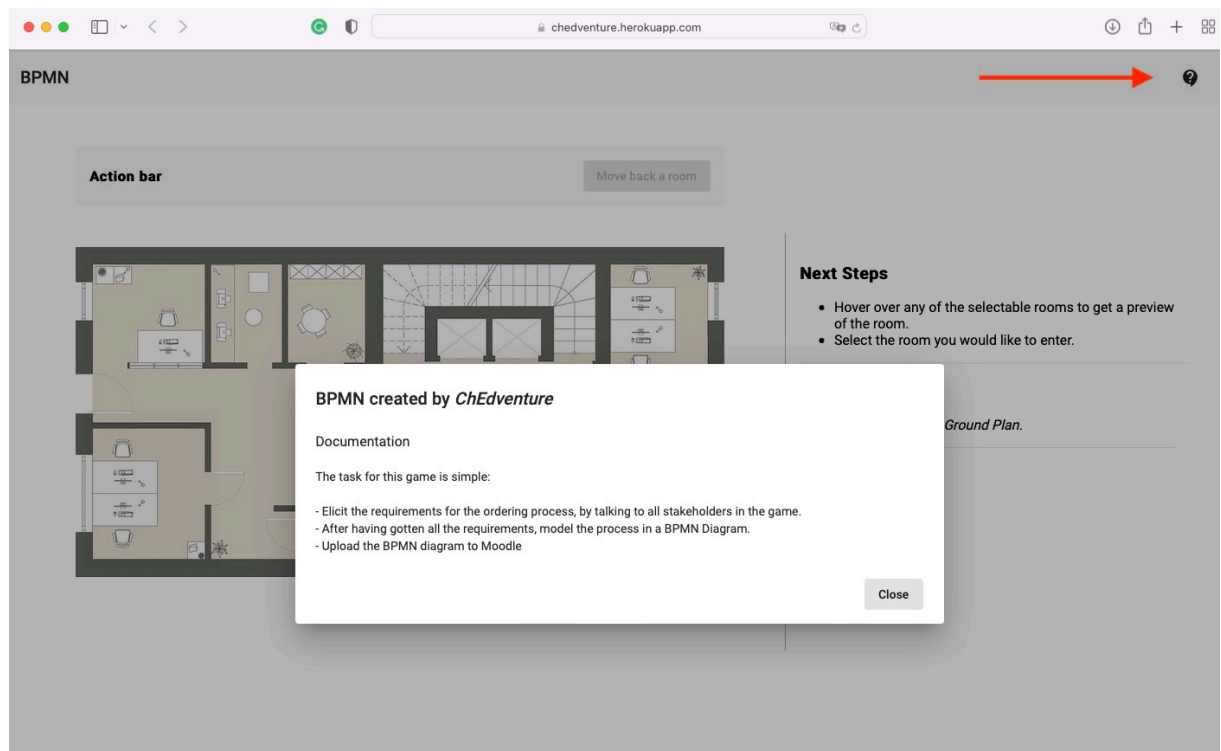
- Initial room in game:** A dropdown menu with 'Ground Plan' selected.
- Define what the first visible room in your game is:** A text area for documentation.
- The task for this game is simple:** A text area containing:
  - Elicit the requirements for the ordering process, by talking to all stakeholders in the game.
  - After having gotten all the requirements, model the process in a BPMN Diagram.
  - Upload the BPMN diagram to Moodle
- Optional:** A text area for a manual/task description for the game.
- Publish game:** A checked checkbox.
- Only once the game is published it is publicly accessible. The game will be available under the following link:** A text field containing 'https://chedventure.herokuapp.com/play/fc2e2092-baab-46c1-95fd-a123ac063178'.
- Buttons:** A 'Save' button.

## Initial room in game

- Choose a room in your game to be the initial room. This must be defined, in order that ChEdventures knows in which room you want your game to start! You can find this option in the third step of the setup process (Final Configuration).

## Documentation

- You can optionally write a documentation for your game. This documentation is accessible by clicking on the far right button in the navigation bar when playing the game:



## Publish game

- The game is only publicly accessible once it has been published! You can publish the game in the third step of the setup process (Final Configuration).

## Share the game-link

- Go to the "My Games" page in the navigation bar.
- Click on the "Copy to clipboard" icon on the game you want to share. If the game has been published, the game-link will copy to your clipboard and you can share the link with your students.

