Web Applications, A.Y. 2019/2020
Master Degree in Computer Engineering
Master Degree in ICT for Internet and Multimedia

Homework 1 – Client-side Design and Development
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1. Objectives

The presented site has the purpose of providing an access method to the information stored in a theater company database. The database is currently under development as the project for the DBMS course, but the entities and their attributes have already been defined.

Since the target of the website are the company decision-makers, high detail has been put to assure that every needed functionality is present, in a compact and easy design language shared across the website.

The login system will allow dynamic access restrictions based on user attributes and relations. The presented version is a full access, "Company manager" view.

2. Main functionalities

The website allows the user to access the content of the company database, this translates in the ability to create,edit, view and list the entities:
- Transactions
- Items
- Departments
- Plays/Events
- Activities
- Users/Members

As well as implementing the needed relations between them.

We have also developed two focused dashboards: one on overall statistics, the other on the financial management.

The website will also provide an authentication system with a set of username-password credentials.

3. Design choices

The website has been built starting from a template called Gentelella, available at https://github.com/ColorlibHQ/gentelella under the MIT Licence. This template is Bootstrap-based and comes with a set of pre-defined plugins and data presentation structures that have been adapted to our needs.

The template UI provided us with a set of navigation tools, a top header and a sidebar. They are responsive, device-aware panels that adapt their content size depending on the available viewport, or by clicking the hamburger menu. We made both the header and sidebar fixed in view, so that a navigation point is always present for the user.

We took the same principles for developing the actual content itself. Each table or form is presented inside responsive panels, each of them providing the most useful functionalities in its top section. Every form has been formatted with a squared look consistently throughout the website.

It's worth mentioning that the template has undergone a craftsmanship process in order to match the www.ruzzante.eu color palette up to the finest possible detail. The reference material included a palette view, some logos, fonts and UI ideas to be implemented. From that we expanded the palette with new color and fonts combinations to obtain the final result.

Consistency has been one of the primary aspects during the development of the website.

The website is composed of 32 individual pages, described in the following sections.
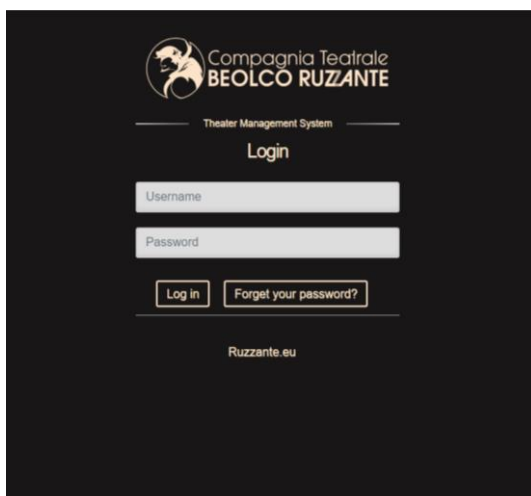
4.1 Login

As for most websites, the login page should appear in a very simple way. In this case only with the classic two forms for email and password and with two buttons, one for the actual login operation, which allow the access to the main dashboard page, and one if the user eventually is unable to remember the password. A reference link to the official webpage of the theater company is placed at the bottom.

There is no such thing as a direct way to create a new user account, since the authorization to insert new members inside the company is given exclusively to the company manager, which is also the main site administrator. In fact, after the creation of a new member profile, the website will automatically send an email to the new member with a temporary password valid only for the first access. It is implicit that the new user should set up a new password as soon as possible, by checking the form under the "edit profile" section.

4.2 Forgot Password

The second button on the login page leads to the forgot password page, which is similar to the login page to maintain style consistency. This time the form has only the email field, which provides a form validation whenever the field remains empty or does not contain a valid email address.

Our decision was to send to the user an email with an access link that will allow the password reset directly from the management system website.
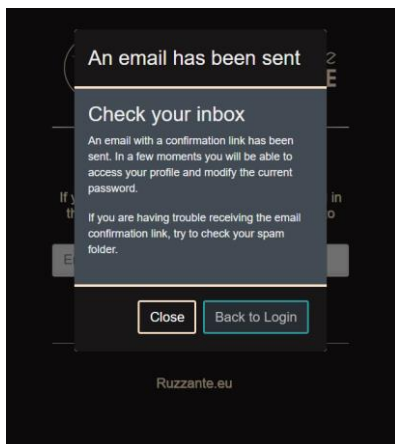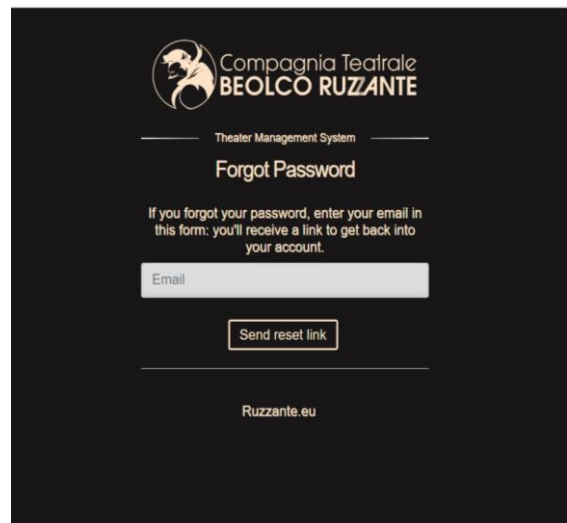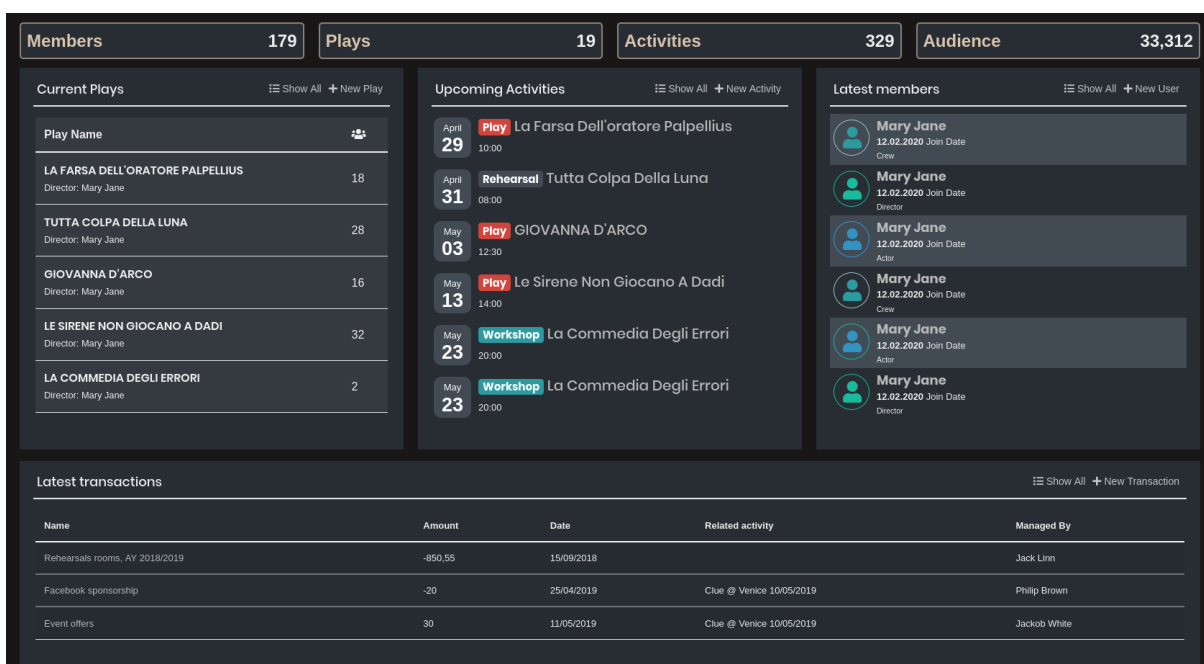
More precisely, when the "send reset link" button is clicked, an AJAX call is made to the server sending the following object:

{ email: user@email.com }.

The server will perform the action of sending the "reset password" email to the provided address and then will reply with the result of the action. Based on this the frontend will react and dynamically display the relevant message.

5.1 Dashboard

Members	179	Plays	19	Activities	329	Audience	33,312

Current Plays

Play Name	
LA FARSA DELL'ORATORE PALPELLIUS Director: Mary Jane	18
TUTTA COLPA DELLA LUNA Director: Mary Jane	28
GIOVANNA D'ARCO Director: Mary Jane	16
LE SIRENE NON GIOCANO A DADI Director: Mary Jane	32
LA COMMEDIA DEGLI ERRORI Director: Mary Jane	2

Upcoming Activities

April 29	Play	La Farsa Dell'oratore Palpellius 10:00
April 31	Rehearsal	Tutta Colpa Della Luna 08:00
May 03	Play	GIOVANNA D'ARCO 12:30
May 13	Play	Le Sirene Non Giocano A Dadi 14:00
May 23	Workshop	La Commedia Degli Errori 20:00
May 23	Workshop	La Commedia Degli Errori 20:00

Latest members

Mary Jane	12.02.2020 Join Date — Crew
Mary Jane	12.02.2020 Join Date — Director
Mary Jane	12.02.2020 Join Date — Actor
Mary Jane	12.02.2020 Join Date — Crew
Mary Jane	12.02.2020 Join Date — Actor
Mary Jane	12.02.2020 Join Date — Director

Latest transactions

Name	Amount	Date	Related activity	Managed By
Rehearsals rooms, AY 2018/2019	-850,55	15/09/2018		Jack Linn
Facebook sponsorship	-20	25/04/2019	Clue @ Venice 10/05/2019	Philip Brown
Event offers	30	11/05/2019	Clue @ Venice 10/05/2019	Jackob White

The main Dashboard serves as the entry point in the administration interface after an user has logged-in. Its purpose is to provide the user with a higher-level view of the application. In the upper part there are displayed some updated stats regarding the most important parts of the system: total number of members, total number of plays, total number of activities and total audience. This idea is continued and expanded on by the next 4 panels available displaying the current plays, upcoming activities, latest members and latest transactions. All these feature shortcuts by means of links to various actions possible like showing all the items in a certain category or creating a new item.

5.2 Financial Dashboard

The Financial Dashboard follows the same principle but applied to only one category, being more specialized, by displaying the current year (by default) or a certain selected year financial status. The tab navigation available in the upper part of the page provides the means to navigate between different years' financial dashboards. Again, shortcuts to the various actions possible (display all, new, edit) are present in the template.

6. Transactions

This set of pages of the website is devoted to the list, creation, edit and view of the expenses and incomes of the company. The focus has been providing ease of access to the needed data, also considering the relations between transactions and other entities.

The user is presented first with the transaction list page, with a restricted number of details for each entry is presented. This can allow a faster loading of the page. When an entry is clicked, using the AJAX technique, a XMLHttpRequest is sent, with a JSON body containing the requested ID of the transaction and the size of the informative content. The received response is parsed to JSON and then used to fill up the panel on the right side. The panel is fixed in the viewport, so that only the transaction list is scrollable.

```json
{
    "ID" : "12568",
    "name" : "Rehearsals Rooms, AY 2018/2019",
    "amount" : -850.55 ,
    "date" : "15/09/2018",
    "desc" : "Yearly Rehearsal rooms renting, 15/10/2018-30/05/2019, Padua Arts center",
    "relAct" : "N/D",
    "relActLink" : "",
    "relItem" : "N/D",
    "invoice" : "<a > Open PDF here  </a>",
    "mngby" : "Jack Linn"
}
```

Then, the "new transaction" page is mainly built with forms. Since transactions are usually related to item acquisition, we allowed the user to manage this relation (as a new item creation) in the transaction building process itself, using a checkbox-activated form area, implemented in JavaScript.

The "edit transaction" page is precompiled with the known data Here also the relations to other entities can be set.

7. Items

It is a set of 4 pages to help the users manage the equipment of the theater. It provides some basic functions such as: Create new item, view, edit and delete existing items. It also allows you to restrict access from different types of users.
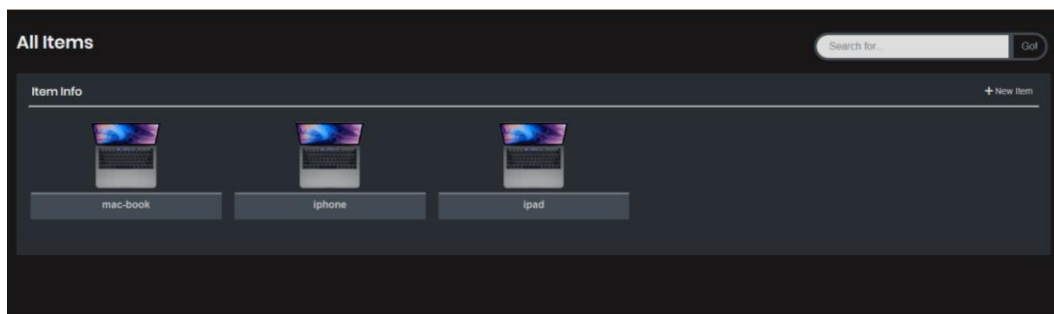
7.1 Item List

Basically, the information of the items is displayed as a gallery with the items' name and related images. In this page, we also added a search bar and + new item button that directs the user to the add new item page. The user can view the item detail by clicking to the item name. When the user hovers to each item, 2 buttons will appear: Edit and Delete.

7.2 Add New Item

This page presents a form where users can create new items for the theater. You have to insert some mandatory information and be able to leave the others blank.

- Name (required): The item
  name

- Description (optional): The
  description of this item

- Quantity (required): The number of item and the input must be a positive number

- Size (optional): The size of item and the input must be a number

- Related Play (optional): The play that will use this item

- Department (required): The department that this item is in

- Owner (required): The member that keeps the item

- Historical Genre (optional): Information about the other times the item was used for a specific
  activity/play

- Image (optional): Image of the item. User is provided the button to upload the photo

In addition, we have 3 buttons: Submit, Reset and Cancel to implement the corresponding functions.
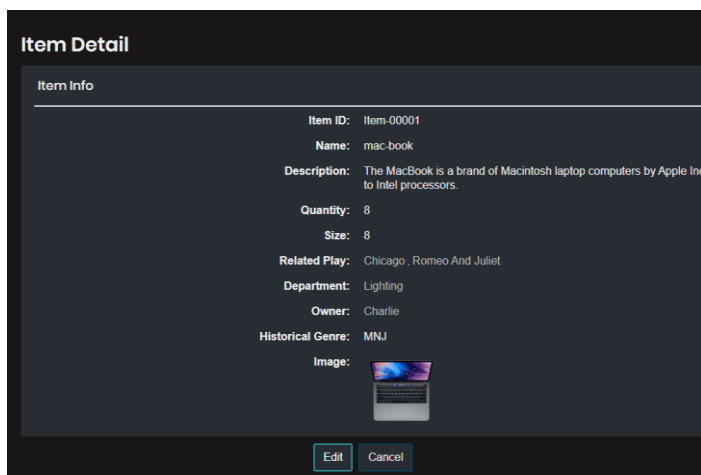
7.3 Item Detail

Item detail page displays all information about the item. Users can see the detail page by clicking to the values of Related Play, Department and Owner fields. Moreover, it also has Edit, Cancel and Delete buttons for corresponding functions.

7.4 Edit Item

The edit item page is precompiled with the known data. Some fields are not able to change. The Add and Remove related play fields allow the user to change the playlist using the item. There are 6 functional buttons: Delete, Add play, Remove play, Submit, Reset and Cancel.
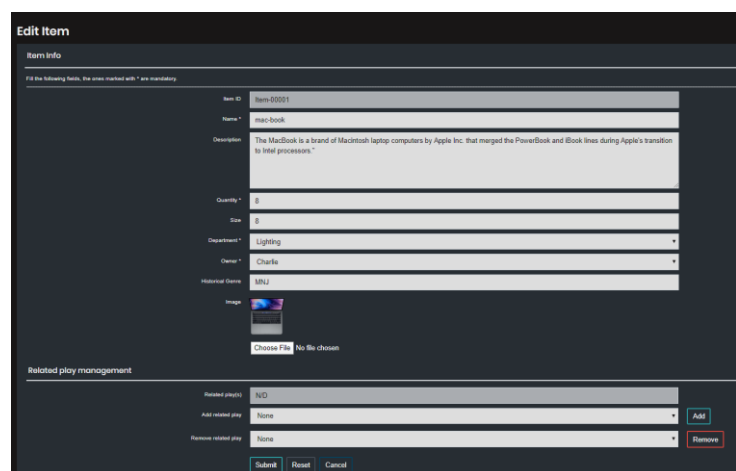
8. Department

We provide 4 pages for managing the Department of the theater. The main functions are new department creating, viewing, edit and delete existing departments.
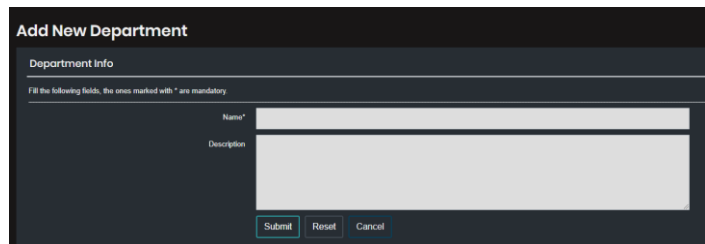
8.1 Department List

The page is a table showing the list of departments. By clicking on the department name, users can go to the department detail page and Action - Edit to go to the Edit Department page. Search bar and + New Department button also be presented.
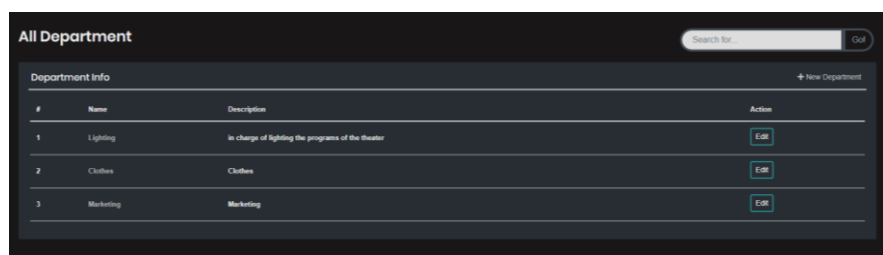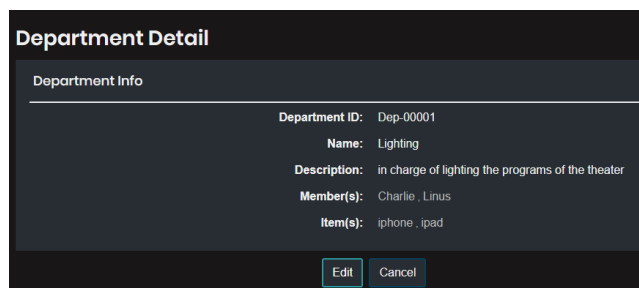
8.2 Add New Department

We simply create the form with 2 fields to help the user input the data for a department. 3 buttons Submit, Reset and Cancel serve corresponding functions. The name of the department is mandatory and unique. The description is optional.
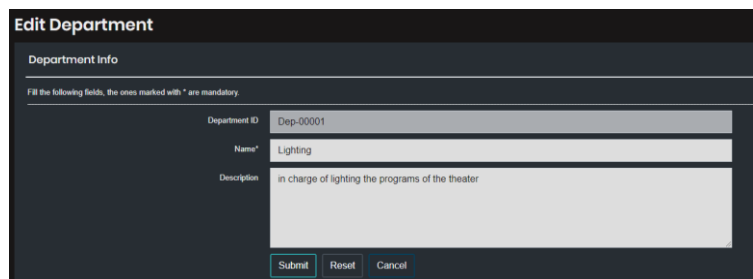
8.3 Department Detail

It displays the data for the known department. On the other hand, the members and item list assigned to the department also appear. The user can view the details by clicking to each member or item name. The functional buttons are Delete, Edit and Cancel.

8.4 Edit Department

It shows the main data for the existing department and users can modify the name and the description. By using 4 functional buttons: Delete, Submit, Reset and Cancel, you can remove, save, set to blank and cancel this page.
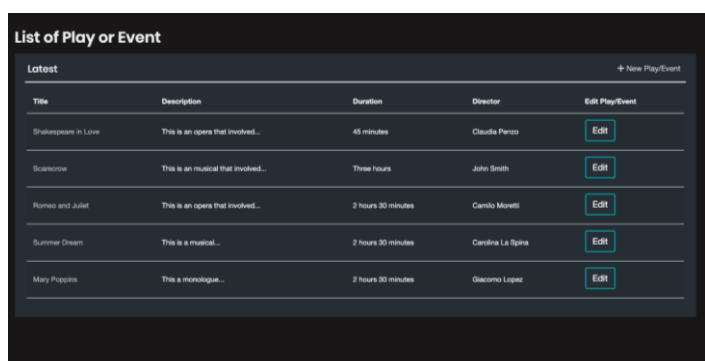
9. Play/ Event:

On the sidebar we can find this option of a list that the Company needs in order to have a planification of possible activities that are going to be performed. By this, each play or event is very related with an Activity. Also, this part is very important because Members and Items can be involved on each Play or Event.

9.1 List of Play or Event

The List of Play or Event page permits the User: See a list, create, edit and view details of a Play or Event that exist or will be part of the Ruzzante Company.

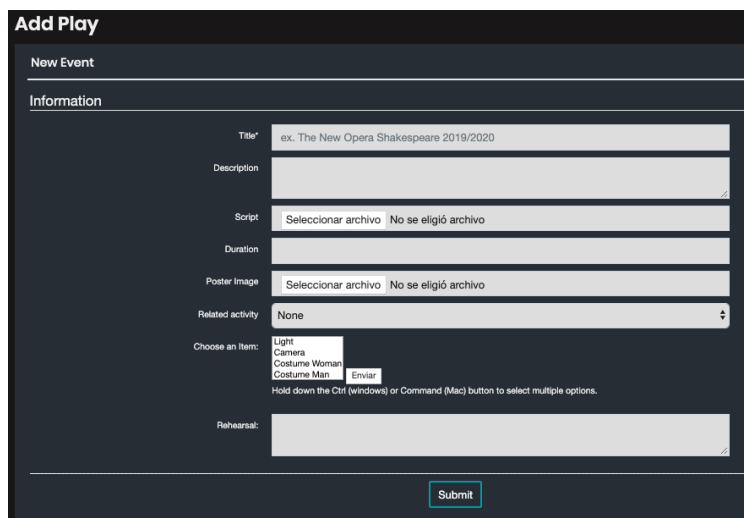Each Play or Event, that is into the list, is represented by small details:

- Title (name of the play)
- Description (small part of all the description)
- Duration (minutes of performance of the play)
- View (possibility to see all the details that involve a Play or Event).
- Edit (change the Event/Play according to the necessities of the Company).

Doing click on the Title of each Play/Event brings the possibility to see all the details of each one (as it can be verified on the Play view page). Each Play/Event has a button on a right column where the User can edit it. Also, the link "New Play/Event" (on the top right corner) that gives the option to create a new Play/Event.

9.2 New Play

Creating a new play brings the possibility of introducing Plays or Events that the company has planned for the present season. This page brings the possibility to create a new Play or Event in order to have a list of each one with details:

- Title: in txt, get the name of the Play or Event.
- Description: in txt, get a small explanation of the Play or Event.
- Script: to upload some document about the Script of the Play or Event.
- Duration: Time that the Play or Event will be performed (in minutes).
- Poster Image: for uploading some image that shows the flyer of the Play or Event.
- Related Activity: to choose an Activity that has been created for this Play or Event.
- Choose an Item: for choose one or more Items that will be involved for the Play or Event.
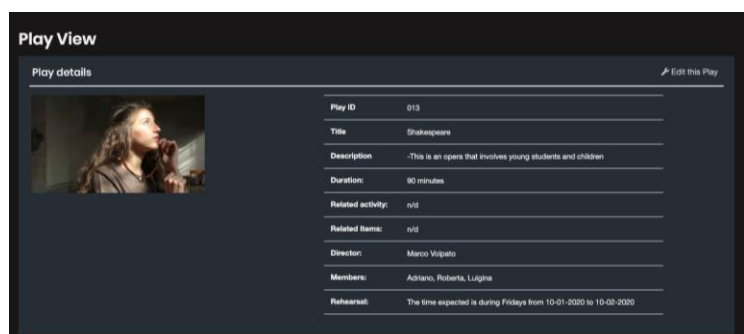- Rehearsal: A small description of the time and details that is going to perform the Play or Event.

All the parts of the new play will be submitted through a button.
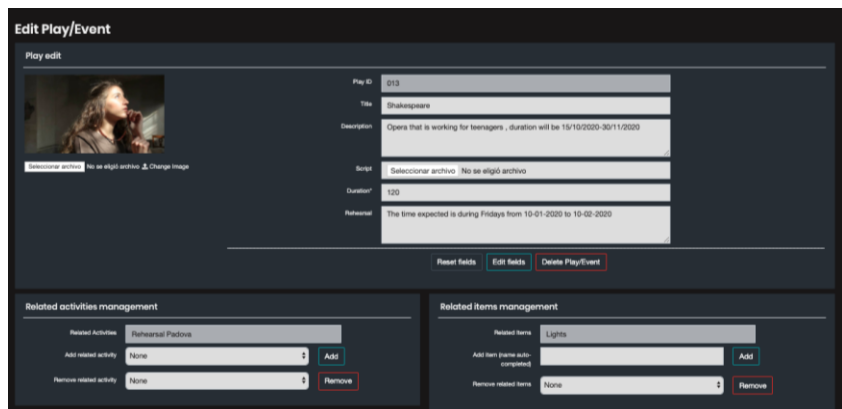
9.3 Play View

The Play View page offers the possibility to see the details of a Play or Event: Poster Image, Play ID, Title, Description, Duration, Related activity, Related Items, Director, Member (actors) and Rehearsal. It is important to mention that this is a quick view where the user can see a Play or Event and can decide to change it (through the link= Edit this play on the right top).

9.4 Edit Play

On this page shows the same parts of the page NewPlay but saving de last data that has been created and brings the possibility to change the Related activity and the Related Items. Through reset, edit or delete buttons, the system will charge the changes that the User made.

10 Activity

The activities on the sidebar is a part where you can access to a list that the Company of theater needs in order to become reality a Play or Event that has been planned.

10.1 Activity list

The Activity list page offers the possibility to see a list of Upcoming Activities and Past Activities. It can be noticed the date, title, location, privacy tag, and other actions. Also, if the user wants to create a new Activity, it can be made following the link of the right top (NewActivity) in order to do this.

10.2 New Activity

This page offers the possibility to create a new activity that is going to be related to a Play or Event and that. The attributes of a new Activity are: Title, Type, Assigned Play, Date, Start time, location, description, Privacy tag, Audience size and Max audience. There are two buttons that permit to: reset or create the new Activity.

10.3 View Activity

If a User needs to see the details of an activity (View Activity page), he has to click on the title of the activity that is on the list of Activities.

This page shows all details (attributes) that has been added by the User, but also the season and the related transactions.

10.4 Edit Activity

On this page, it can verify the same actions than the new Activity offers in order that a User can change the attributes or let some of them. There are three buttons that permit to: reset, submit or delete the activity.

11 Members

11.1 Edit Profile

From the upper right corner in the top navigation bar the user can click on a drop down menù that allows for Logout, viewing and editing of the user's profile.
The user profile page is a simple table to show name, picture and the history of tasks in plays.

11.2 Admin operations on members

Clicking on the "Users" link in the sidebar bring the administrator to the user list page that is the gateway to all the functions for managing each user assignation to plays and departments:

The page consists of a simple table showing the relevant information for each user, a search field for filtering by name or surname the users shown in the table.

The last two columns of the user list table are links to the pages for assigning the related user to departments and plays.

The page for adding a new user or editing or deleting an existing one is a simple form with field validation.

11.3 Member assignation to departments

Form for editing the assignment of a user to departments: the username is shown on top and the checked checkboxes represent the current departments assignments and can be edited.

11.4 Member assignation to plays

The page for assigning users to plays has on the left half the form for making new assignments or editing existing ones: when a task (alias for department) is selected from the drop down list, upon pressing the "add" button it is appended in the "tasks" textarea, that is not directly editable by the user and can be reset via the "clear" button.

The assigned play is inserted through a datalist field and the season is selected via another drop down.

On the right half there's the history table of all the plays the user has been assigned to, each element in the play column is clickable and leads to the related play page, while clicking on an element of the task column fills up the form on the left with the selected data, so the assignation can be edited on removed via the aforementioned form.

12. Miscellaneous

For the current iteration we have created a "404 Not found" page that is displayed whenever a route that is not defined is accessed.

In the next iteration, when we will add a backend, other suitable error pages that will make sense in that scenario will be added like "401 Unauthorized" for example.