Theatre environment management

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ABSTRACT

The basis of this project was to take the entire environment of a theatre, taking all the individual parts and making online counter parts for it and thus converting the entire experience into a virtual one. The aesthetically pleasing yet quick response online website aims to replace the ticketing counters of the theatres. The project aims to reduce the bustle and rush that we obtain in the ticketing counters and the various facilities. The communication between the managers and employees will be converted into a formal one, which is absent in the present theatre environment. The ease of booking will add to the bonus for the customers. With the newly introduced digital economy in India using web services for one of the biggest upcoming industry is a great option for start-ups. The convenience and ease of booking the ticket from home will attract more customers to book the tickets. Overall the online booking is a boost to overall entertainment and service industry.

Keywords: *Booking movie, online movie, User, Admin, Theatre, Movie, Shows.*

1. INTRODUCTION

In olden days, the ticketing system or the theatre system was done face to face and the long lines of ticket booking was always an issue which troubled people. To book the ticket people had to depend on the person behind the window. The whole process was a long time exercise and many middlemen were involved which made the process shady and unpleasant. The online ticketing system will remove the middle man. Thus creating a time efficient and convenient system. Overall the ease of booking system is increased thus the experience overall is improved.

The theatre environment management system created, also finds a way to convert the informal conversations between the employees into a formal and thus the admin can hold a database on what the recent messages were to the individual employees

The theatre management system created can thus be considered one of a kind which makes the maximum use recent technologies to optimize the virtual environment.

2. TECHNOLOGIES TO BE USED

Rational Rose, Visio, HTML, CSS, JavaScript, PHP, MySQL

2.1 Visio

Visio is a Microsoft software which is very helpful for designing and analyzing the initial part of the software which is being created. It is very useful time management for the project, as using this software we can make Gantt Chat, Pert Chart, Time Line chart, etc.

2.2 Rational Rose

Rational Rose is an object-oriented Unified Modelling Language (also known as UML) tool. Which is used for creating the different UML diagram or the architecture designs (like Data Flow Diagram, Activity Diagram, Component diagram, etc.). Rational Rose documents the diagrams that are being constructed in it, and then it generates code in the designer's choice of Java, C++ or Data Definition Language.

2.3 Front End

The front end is designed using html, CSS, JavaScript

2.3.1 HTML: HTML or Hyper Text Mark-up Language is the main mark-up language for creating web pages and other information that can be displayed in a web browser. It is used because as its very user-friendly and it can be easily accessed on any system having a web browser. And the GUI is generated through it very easily.

```
<! DOCTYPE html>
<html>
 <head>
  <title>This is a title</title>
 </head>
 <body>
  <p>Hello world! </p>
 </body>
</html>
```

2.3.2 CSS: CSS or also known as Cascading Style Sheets is a style sheet language that is being used for describing the look and formatting of a document written in a mark-up language. It can be embedded along with our HTML code to make our page look attractive and user-friendly.

2.3.3 JavaScript: JavaScript (JS) is a dynamic computer programming language.
It is used in almost all of the browsers available today in the market. It allows the client-side and the user to communicate and take part accordingly.

2.4 Back End

The back end is designed using MySQL and which is used to design the databases.

2.4.1 MySql-MySQL is the world's second most widely used open source relational database management system (RDBMS). This language is used for creating the database which is used for storing the details of each user. It has many in-built commands which help in the manipulation of data and manage the database.

2.4.2 PHP- It is a server-side scripting language designed for web development. PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. PHP will work with virtually all database software, including local hosts as well online database tools.

- Connecting to MySQL database
- Create MySQL Database Using PHP
- Delete MySQL database Using PHP.
- Insert data from MySQL database.
- Retrieve data from MySQL database
- Updating data into MySQL database
- Updating data into MySQL database
- Using PHP to backup Updating MySQL database.

3. Detailed Explanation

3.1 Login (for admin and users)

The login module helps the user to login into the system and proceed for booking the movie and the seats for the movie. Whereas this module also helps the admin to login into the system and maintain the system (like the movie, screens, etc.).

In this module, the user is only allowed to enter into the system when the credentials of the user match with the database. If the credentials do not match the user is not allowed to enter into the system. And it is same for the admin.
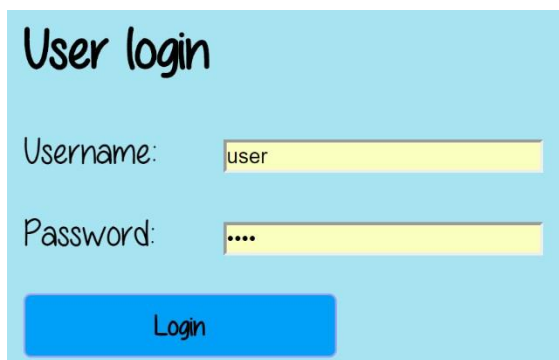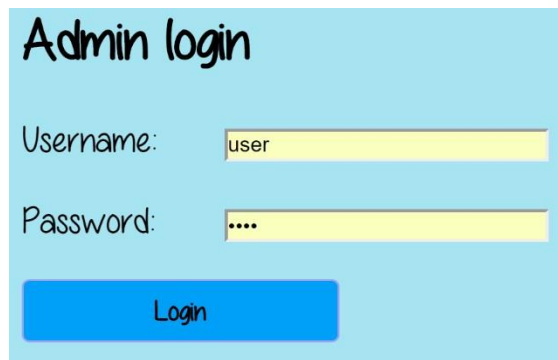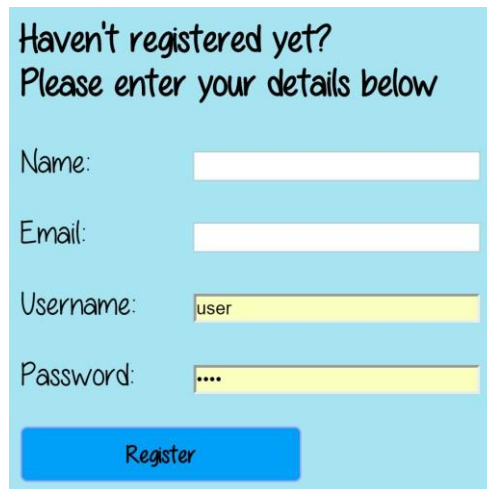

Fig- 1: GUI for User login

Fig- 2: GUI for Admin login

3.2 Register (for new users)

If the user is not registered to the system, then he/she can register to the system using this module by providing the details like name, email, username, and password. After entering all the details, the user will be registered to the system and all the details will be stored in the database. And then after that, the user can login into the system.

Fig- 3: GUI for Registration

3.3 Adding a movie (admin)

This module is for admin. In this module, the admin is given the authority to add a movie to the theatre. While adding the movie the admin should provide some information about the movie like the name of the movie, movie's genre and the rating given to the movie, as the rating would be very useful to the users. The users can see the rating while booking the move and also to see the rating of the movie the users won't need to google it.
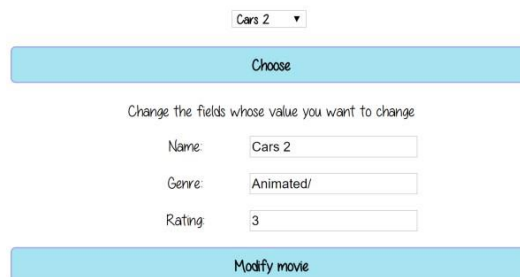
Fig- 4: GUI for adding a new movie

3.4 Updating the movie (admin)

In this module, the admin is allowed to change/ update the information related to the pre-existing movie in the system. For that, the admin should know the name of the movie of which he/she wants to the update. And then after selecting the movie, the admin can change the name of the movie, genre of the movie and also the rating of the movie. And after clicking the update button the details of the movie are updated.

Fig- 5: GUI for updating movie

3.5 Adding new shows (admin)

This module is also for the admin. In this module, the admin can add new shows to the theatre. For this, the admin should provide the following details: ShowID, the name of the movie, total available seats for the movie and the timing of the show.

Fill out the form below to add a new show

Fig- 6: GUI for adding new shows

3.6 Adding new employees

As in our theatre environment system, there is a new facility available which is not common in any of the available systems. In our system, the admin in allowed to add the employees how are applying for the theatre. To add a new employee, the admin should give the name of the employee, and should provide unique SSN number to each employee, and should give the role of the new employee. After adding all this information in the system the employee is registered to the system.

Fig- 7: GUI for adding a new employee

4. FUNCTIONAL REQUIREMENTS

4.1 For users:

4.1.1   **Users should be able to login in into the system:** In this, the registered users should be able to enter into the system by entering the correct credentials. And if the credentials are wrong the user should not be able to enter into the system.

4.1.2   **The user should be able to register himself:** If the user is new to the system and he/she is not registered to the system then the system should be able to register himself/herself to the system by entering the name and the setting the credentials for the system.

4.1.3   **Users should be able to book/cancel the tickets:** The user should be given to book the ticket for the movie, which he/she wants to watch.

4.1.4   **The user should be able to choose to select the mode of payment:** After selecting the movie and the seats the user should have the options to choose the mode of the payment.

4.1.5   **Users should be able to book/cancel the facilities:** Apart from booking the movie the user should also be able to book the additional facilities (like popcorn and any other eatables) this will help the theatre to manage the bustling created during the break/interval of the movie and also the user should be able to cancel the booked facilities.

4.1.6   **Users should be able to change the password:** And the registered users should also be able to change their credentials and create the new credentials for logging into the system.

4.2 For admin:

4.2.1   **Users should be able to login in into the system:** The admin should be able to enter into the system by entering the correct credentials. And if the credentials are wrong the admin should not be able to enter into the system.

4.2.2   **Admin should be able to add/delete theatres:** The admin should be able to add new theatres to the system and the admin should also be able to update or delete the added theatre.

4.2.3   **Admin should be able to add/delete/modify shows for specific movies to the theatres:** Like the admin is able to add the theatres he/she should also be able to add the shows to the theatres and should also be able to delete and modify the shows for the specific movie in the theatre.

4.2.4   **Admin should be able to add/delete/modify the employees:** The admin should be able to add the employees and the admin should be able to allot the role of the employee. And he/she should be able to modify the employee department.

4.2.5   **Admin should be able to add/delete/modify facilities:** The admin should be able to add and modify the facilities in the theatre. For example, if a new facility is to be added to the theatre the admin should be able to add that facility. And if the price of any of the facility is changed and the admin should be able to alter the price of the dame facilities in the system.

4.3 For employees:

4.3.1   **The employee should be able to login in into the system:** Like the admin and user, employees should also be able to login into the system by the provided credentials.

4.3.2   **The employee should be able to ask for proportion:** There should be an option available for the employees where they can ask for the promotion form the employees and the admin should be able to respond to the request made by the employee.

4.3.3   **The employee should be able to ask for a change of location:** Same as the promotion requirement, employees should also be able to ask the admin for the change or the location of their duties.

5. NON-FUNCTIONAL REQUIREMENTS

5.1 **Secure access to confidential data (user's details):** The system should be secure and the security should be provided for the users.

5.2 **24 X 7 availability:** The system should be able 24 hours a day and for all the 7 days of the week.

5.3 Scalable design for easy expansion

5.4 **Integrity in the system:** The user of the system should not modify the database other than when they book the tickets or they register. The admin should not be able to change the software, in a sense that they cannot change the internal functionalities and dependencies of the system.

5.5 **Reliability:** The system should be reliable and should have a very low or not a chance failure and should be robust.

5.6 **Consistency:** The changes made by the user such as booking in the shows should reflect in the admin panel and should also in the data base.

5.7 **Good Graphic User Interface (GUI):** It should be aesthetically pleasing to the various type of users that visit the site, for example, it should be inviting for the customers, while for the admin it should be kept formal.

5.8 **Recovery:** In the case of failures, the system should recover from errors quickly.

5.9 **Good response time:** The time for the response for the website should be fast, as if it is slow then the customer base will not be attracted to book.

6. SYSTEM REQUIREMENTS

- At least 500MB of RAM.
- A web browser like Chrome, Mozilla Firefox, and Microsoft Edge.
- Pentium or equivalent microprocessor
- Video graphics and monitor with at least 800 X 600 resolution.
- Intel Core i5 or i7 are used as a processor because they are faster & provide reliable and stable working environment.
- **User interface priorities**

  - Aesthetic look and feel
  - Use of PHP at least with all registration forms.
  - Browser testing and support for IE, NN, Mozilla, and Firefox.
  - Use of a proper database to ensure proper data storage.
- **Other important issues**

  - The website should have lightweight, meaning long load times should be avoided.
  - Should be portable from one system to another without any effort.
  - The simplicity of interface.
  - Separation and sorting of movies based on rating and Genre.

7. CONCLUSION

After all the hard work, we successfully formed a website with all the features that we collected during our requirement analysis phase. It can perform all the function of the online movie ticket booking website. We have tested our website and finally, we can

conclude that it is fully functional and is useful for booking the online tickets for the movies. Theatre environment system will be a great help for those people how earlier used to go to the theatre and used to book the ticket. It will be a great benefit for those people who even don't get the time to go to the theatre and book the ticket so, now they will be able to book the ticket from there office using their laptops. And it will also be a great help to the theatres as well because it will increase the efficiency of the theatre, basically, it will reduce the time that was earlier utilized by the manual work. At last the final conclusion made is that it is very useful for both user and the theatre.

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