Web Development Project Requirements

Cinema Movies Reservation System

Objectives:
1. ILO1: Practice fundamental web design theories.
2. ILO2: Develop a multi-user and a multi-authority system.
3. ILO3: Practice front-end and back-end web development.

Introduction:

In this project, you are a web designer and you will create a web application requested by a client. The client specifies the required business model and the main features. You will be free to design the website hierarchy and the suitable user interface.

An online automated ticket reservation system for the Cinema is requested by the client. The system allows the cinema management to create, manage, and maintain current and future movies. The system should allow the users to reserve specific seats for the movies they want to attend.

You are required to **design** and **develop** an automated system for the reservation process. The system is used by the management to keep track of movie's schedules, number of vacant/reserved seats, and the registered users.

Business Model:

The Management provided you with the following description of each user:

Site Administrator	The *Site Administrator* is the IT engineer who manages the users' creation and website authorities (managers request to be managers and he accepts).
Management	The *managers* are responsible for managing, creating, and modifying the details of movies. The details of each movie include information about the title, date, start and end time, screening room and poster image
Customers	A *customer* is the user that has registered their personal data as a spectator or a fan with the purpose of reserving movie tickets. They can reserve any number of tickets for any movie as long as these movies are not clashing.

Guest	They are *unregistered users* or users who have not logged in yet. They can log in, register (sign up), and/or view the current movies' details. They can not reserve tickets.

Each movie should have the following **<u>details</u>**:
1. Title
2. Date
3. Start and end time
4. Screening room
5. Poster image

Each user should have the following **<u>personal data</u>**:
1. Username
2. Password
3. First Name
4. Last Name
5. Email Address.
6. Role: Manager/ customer

Functionality Requirements:

The main features required are:

Site Administrator: BONUS

If you wish to do this user you should do the following:
- On SignUp the user chooses whether they are manager or customer
- However they will stay as customer until the site administrator approves them

Otherwise if you are not going to do the bonus on signup they can choose whether they are manager or customer and sign in directly as what they chose.

Feature	Description
F1: Approve new users as an authority.	New Users should sign-up & the user account is given an authority when the administrator approves their authority.
F2: Remove an existing user.	The administrator can remove an existing account.

Managers:

Feature	Description
F3: Create a new movie event	The managers can create a new movie event and add all its details.

F4: Edit the details of an existing movie.	The managers can change/edit any of the details of a certain movie.
F5: View movies details	The managers can view movie details.
F6: View vacant/reserved seats for each movie.	The managers can view the overall seat status for each event (vacant/reserved).

Customers :

Feature	Description
F5: View movies details	The customer can view all movie's details as well as the vacant seats for each movie.
F7: Reserve vacant seat(s) in future movies.	The customer can select vacant seat/s only. The customer is asked to enter a credit card number & its pin number. Then the reservation is confirmed.
F8: Cancel a reservation	The customer can cancel a reserved ticket only 3 hours before the start of the event. The seat/s in the reservation should be vacant again.

Guests:

Feature	Description
F9: Register a new account.	The guest can register a new account (whether as a fan or as a manager).
F10: Sign in as an existing account	The guest can log in as an existing account.
F5: View movies details	The customer can view all movie's details as well as the vacant seats for each movie.
F11: View vacant/reserved seats as a guest	The guests can view the overall seat status for each event (vacant/reserved). And on clicking on a seat they should be asked if they want to be directed to SignIn if they want to reserve a seat or stay in the same page.

Information About The Cinema Rooms

To make things simpler the rooms of the cinema are fixed.
There are 2 rooms in this cinema. The rooms are of sizes 20 and 30 seats.
It is up to you to choose the orientation of the room (how many rows , how many seats in each row, if all rows have the same number of seats)

Additional required specifications for any user type:

1. **Room shape:**
   Grid.

2. **Reserving a specific seat graphically:**
   the vacant/reserved seats should be clearly distinguishable.

3. **Reservation Conflicts: BONUS**
   A specific seat is reserved to a single user.
   For example, if two users try to reserve a specific seat at the same time, the system should reserve the seat to only one of them.

Additional required specifications for SignUp feature:

1. **Username:** should be unique

2. **Email:** Should be unique

3. **Password:**
   Should be confirmed twice
   More than 8 characters
   Should contain at least 1 digit and 1 letter

The main web pages that must exist:

1. Website Home Page (The main page for the website)
2. Login Page (A page where the user should enter their username & password)

The basic requirements that must be met on the project are:
1. HTML
2. CSS and styling to design an appealing UI to your website.
3. Client-side scripting (JavaScript or JQuery).
4. Server-side scripting (PHP).
5. Implementing a database to store your data (MYSQL as an option).
6. Meeting basic web design fundamentals.

You are free to use the following frameworks for front-end and back-end respectively:
   Front End: AngularJS, React, or any other framework.
   Back End: Laravel, Node.js, or any other framework.
   For CSS and styling: Bootstrap, or any other framework.

Teams

Each team consists of **3 to 5** members.

Final Delivery:

- You should submit all the files you used in a neat and an organized hierarchy.
- A text/pdf file including
    - Team number
    - Team members' names and codes
    - Workload distribution

Grading Criteria

Grade will be mainly on the feature as a whole (i.e. if it works from both front-end and back-end)
If the feature isn't made in the front-end you don't get its grade at all.

- **Plagiarized projects will be graded zero without tolerance.**