Cinema Ticket Booking System

Project Summary

The primary objective of our project is to construct a web application hosted on GCP that runs a Database server in MySQL. The web pages will be built utilizing PHP, HTML, CSS, and JavaScript. These tools will enable customers to connect to the system and use it through the Internet from any place, with any Operating System and browser.

Cinema-going is one of the most popular out-of-home cultural activity, affecting a series of social, economic, and ethnic phenomena in modern societies. Cinemas are an integral part of cities and contribute to the definition of a local geography and identity. They also contribute to the preservation of the collective memory; since they constitute a significant social and cultural practice linked to a specific geographical landscape acting as a common reference or landmark for many individuals.

Through this project we present a comprehensive solution for virtual ticket booking in multiplexes - an online ticket selling portal that is easy to understand, user friendly, convenient, and offers the simplicity of fast point-and-click service to the customers.

This powerful software program is specifically designed for cinema owners, to sell tickets online. This intuitive visual interface makes day-to-day aspects of selling and buying fast, easy, and reliable for both the user and website administrators; These admins are responsible for controlling and maintaining all back-end functionalities like, movie details, ticket rates, show times, customer information, and sales history saved in the database.

Description

For the customers:

The website will act as an interface that enables them to register, login, and browse the movie catalogue at the cinema. The users will also be able to browse multiple show offerings for a particular set of movies and book them. The users also have the option to select the number of seats, and the exact seats they want to book. The users will also have a profile page where they can update their information, see current and past bookings. The web application will also send digital tickets to customers for their respective bookings.

For the admins:

The web applications will allow the admins to completely manage the cinema. The admins can add new movie listings and schedule screens and time for the movies. The admins can also update or delete existing showings. The admins will also have a dashboard to view which shows are

generating the most revenue, so they can add more shows for that movie, and vice-versa. The admins can also use this data to override the movie prices for certain movies that aren't performing well. Further, the admins can also give admin rights to other staff working at the cinema.

Usefulness

The project is of high relevance to a real-world scenario where users want to book movie tickets online. This offers customers the convenience to book tickets for their favorite movies from the comfort of their house (even in advance) and avoid long ticket booking queues at the cinemas. Such applications already exist in the world, for example Fandango, BookMyShow. These applications are already in use and have millions of active users. However, our application distinguishes itself from such platforms by focusing on a single cinema. This has multiple benefits. First it allows the admins to look at the analytics from all available shows and make important business decisions. Second, it gives the cinema administration the ability to collect information about their consumers like movie preferences and use that data for further driving up sales through recommendations and loyalty programs.

Data Description/Realness

The database will have the following relations:

- User (Username, Email, Password)
- Movie (MovieId, MovieName, Description, Release date)
- Shows (ShowId, MovieId, ShowTiming, Screen, Price)
- Bookings (BookingId, Username, Timestamp, ShowId, SeatId)
- Seats (SeatId, ShowId, Availability)

All data for User, Shows, and Seats will be populated using a random generator script and the Movies relation will be populated via admin functionality.

Functionality

User Module will have the following functionalities:

- User Registration: User registers with a username (for logging in later), email address and password
- User Login: User logs in with username and password

- User Homepage: After login, the user can view information about upcoming movies; User can **search** for a particular movie; Users can check the different show timings for each movie; User can **check** the seat availability for a particular show.
- Book Tickets: If the ticket is available, the user can book the ticket; User can select the number of seats and book the tickets for a specified show time.
- User Profile: After booking tickets, the user can check the profile page for the history of bookings.

Admin Module will have the following functionalities:

- Admin Login: Admin logs in with admin username and password
- Manage Movies: Admin can manage the movies i.e. add new movies or delete existing movies
- Manage Users: Admin can manage the existing movies i.e. add new users or delete users; Admin can even create other admin accounts
- Manage Shows: Admin can add or delete show timings for existing movies

We'll also be **dynamically updating the data displayed using triggers** to remove past show timings and remove movies with release date X weeks in the past.

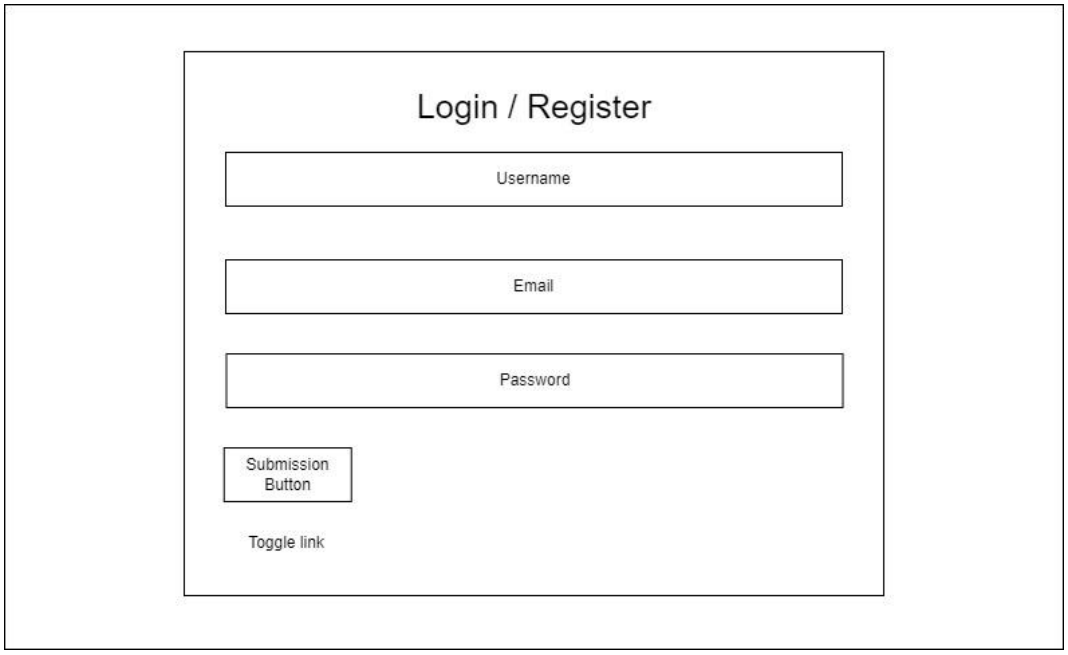
Creative Component

We currently plan to incorporate the following additional features in our system:

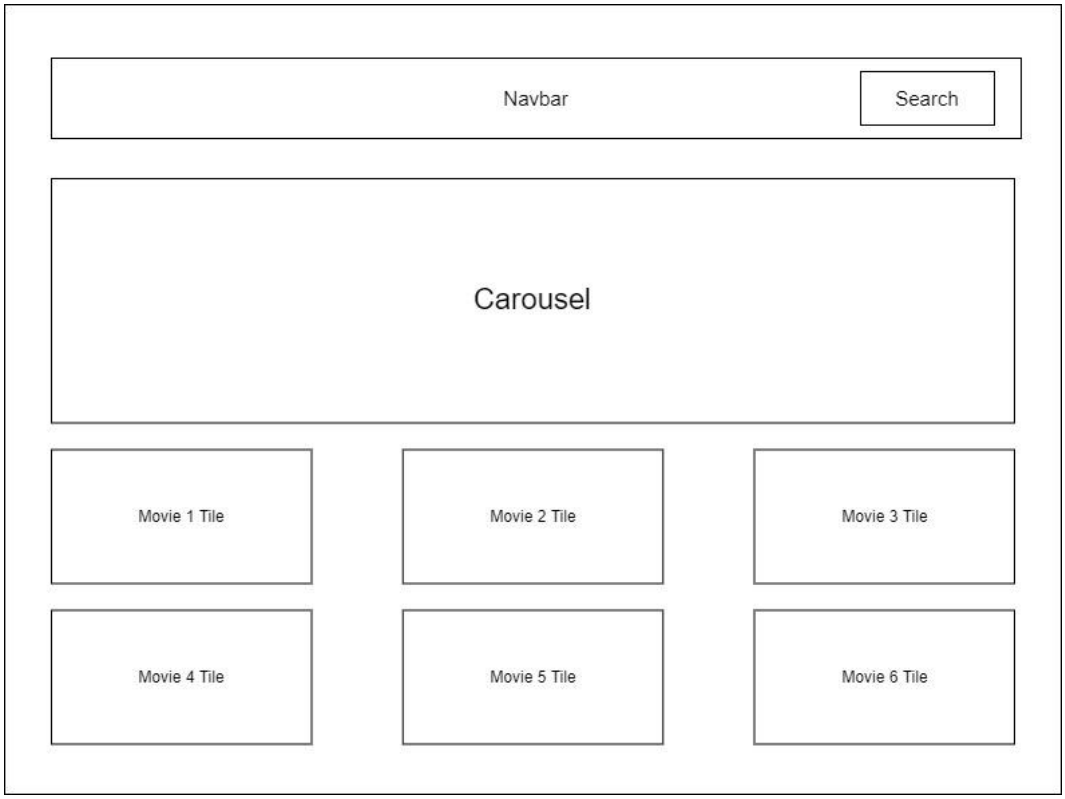
- Upon successful completion of ticket booking, the user will receive a **push notification** through email which will contain a **QR Code** containing the details of the booking.
- We also plan to create a statistical admin dashboard which will help admins analyze the revenues from different movies to help them make intelligent business decisions.

UI Mockups

User Login/Registration

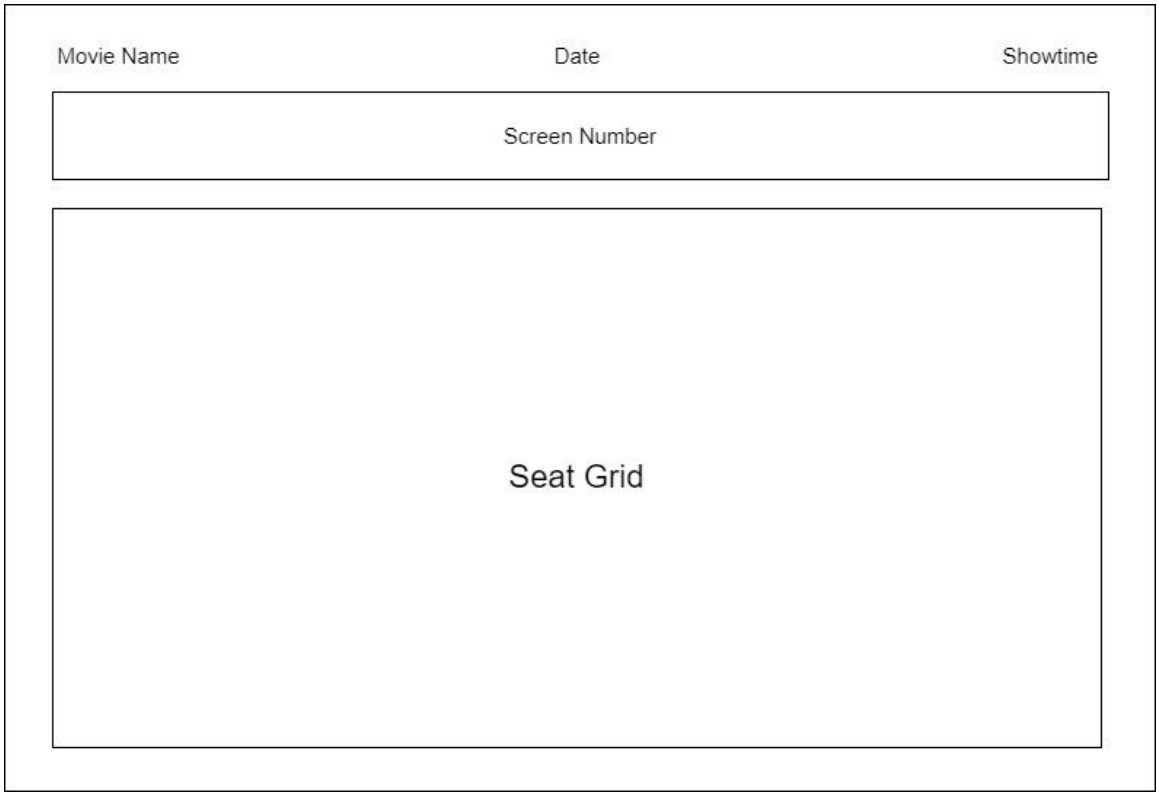


User Homepage

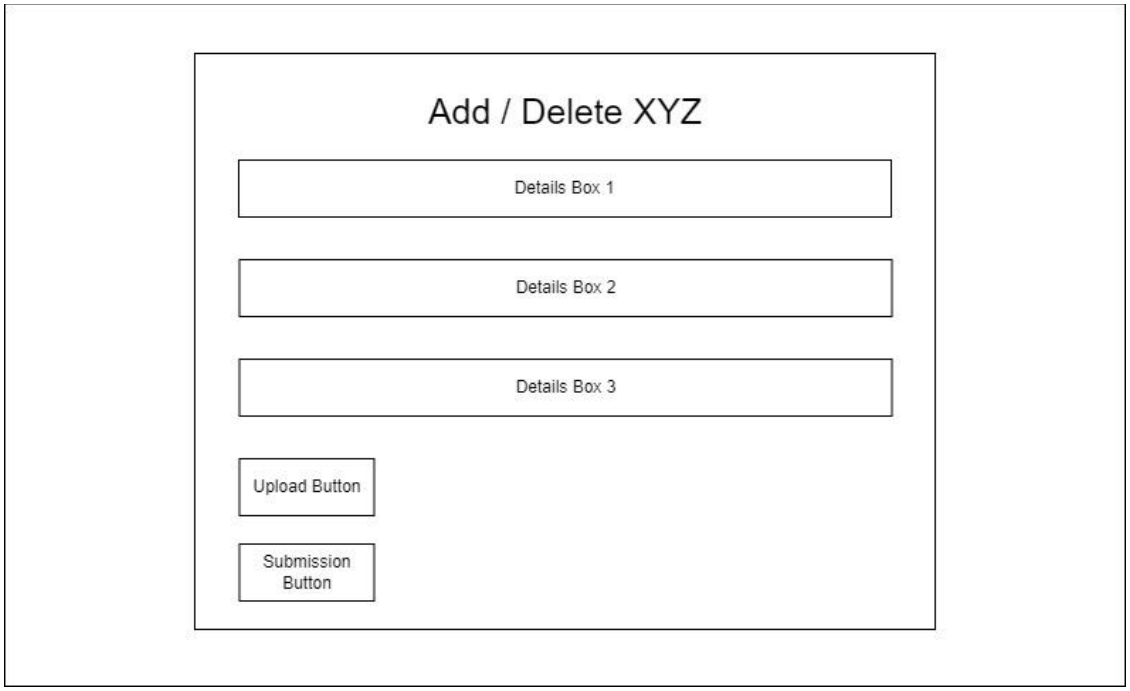


Movie Information Page

Seat Selection Page



Admin Functionality Page



Work Distribution

UI and Frontend

This will include implementing the advanced database mechanisms like queries, triggers, stored procedures for the respective pages. The identified sub-tasks are distributed as follows:

- UI Mockup & Designing: All team members will be working together on designing the UI of the entire website which will include login, registrations, bookings, and profile pages.
- Implementation of login & registration pages will be done by Member 1.
- Implementation of user profile and dashboards will be done by Member 2
- Incorporation of home page, search functionality, and movie information page will be done by Member 3.
- Execution of seat selection and booking will be done by Member 4.

Backend & Database

Our database will have 5 tables and each member will be responsible for creation and population of at least 1 table & work on integration of the backend and database with the front-end.