Name: Atharva Sunil Dhamankar
Roll number: 21f1005520
Email Id: 21f1005520@ds.study.iitm.ac.in
Video Link:
https://drive.google.com/file/d/1xIBOjSuoaWBFA5lzehAYvvZR6CMAx0u4/view?usp=sharing

Project Title: MAD-1 Ticket Booking Application

Introduction:

The movie ticket booking website is a web application that allows users to book tickets online. The website is based on the Flask framework. The website provides a user-friendly interface to book movie tickets as well as providing the admin efficient control to manage the movies, shows and venues present. This report provides a detailed analysis of the features, technology stack and future scope of the movie ticket booking website.

Features:

The movie ticket booking website has the following features:

Homepage:

The homepage has a collection of all currently available shows that are scheduled. These shows have a venue and a movie that is being screened. Both of these have hyperlinks to the specific page that provides more information about the venue or movie respectively. If the user is logged in as a user (not an admin) then the user can also book tickets to the specific shows.

Bookings:

Each show has a capacity that is derived from its parent venue. If the number of total tickets booked is equal to the capacity of the parent venue, the system no longer allows the user to book more tickets.

Bookings overview and Rating:

The users profile page displays the users bookings and enables the user to provide singular ratings for both the venue and the movie on the basis of the shows experience. Also all booking details such as show details, number of tickets and total cost of booking are displayed here.

Venue, Movie, Show Creation:

An admin has the ability to create new venues and movies and thus transitively shows based on the movies and venues. These venues/movies/shows can be created/edited and deleted, thus providing very high flexibility and control to the admin users. These changes are then cascaded across the entire website thus maintaining integrity and consistency.

Search System:

The search system built in the website allows users to search on the basis of tags, genres, venues, movies addresses etc thus providing a high amount of search coverage to the users.

Summary:

The admin users are provided an overview of the bookings performed by the users thus showing the performance and popularity of both the movies and the venues. This data is extracted from the bookings database and parsed separately for movies and venues. A 5 point line plot is

plotted thus providing an overview of performance of all movies with 5 points per movie, leading to an excellent quick overview.

Booking Confirmation:

After the payment is successful, the user will receive a confirmation email with their booking details. The website also allows users to view their booking history and cancel bookings if required.

Technology Stack:

The movie ticket booking website is built using the following technologies:

Flask Framework:

Flask is a lightweight web application framework written in Python that is used to build the website's backend. The Flask framework is easy to use and provides a range of features that make it an ideal choice for web application development.

HTML, CSS, JavaScript:

HTML is used for website structure, CSS is used for website design, and JavaScript is used for website interactivity, more specifically url parsing and page redirecting as well as dynamically altering the contents of the page on the run.

Sqlite Database:

The sqlite3 db is used to store the website's data, including movie details, venue details, show timings, admin details, user details, bookings, and movie/venue ratings. Sqlite3 is a popular open-source database management system that is known for its scalability and reliability and is built in into python making it quick and easy to integrate into the project.

Future Scope:

The movie ticket booking website has the potential for further development and enhancement. The following are some of the areas that can be improved:

Custom user interaction:

Allowing the user to select the specific details of their seats as well as method of payments

Venue resource automatic constraint:

At this point there is no active constraint that prevents the overlap of shows at a specific venue. By adding a time duration to movies and defining the total max resources available with a venue we can establish a system that prevents overlap of screening scheduling for the admins.

Enhanced movie/venue pages:

By introducing backend scraping we can integrate a system that automatically provides a map on the venue pages and link trailers to movies thus making the user experience more rich and engaging.

UI Beautification:

Currently the UI is not extremely well developed and has scope to be made more user friendly

Multi Language support:

Provide multi language support so as to increase the number of potential users. Automate this entire process thus requiring only a single language input from the admin which later is translated into different languages.