

Project Report Ticket Booking System

Author

Yash Mishra

ID: 21f1006461

Email: 21f1006461@ds.study.iitm.ac.in

Description

The Ticket Booking System is a Flask-based web application designed to seamlessly facilitate the booking of tickets for various shows. This application offers users the ability to sign up, log in, explore available shows, purchase tickets, and efficiently manage show information. The project's primary aim is to simplify the ticket booking process and provide an intuitive platform for both users and administrators, thereby enhancing the overall user experience.

Technologies Used

The Ticket Booking System leverages the following technologies:

Flask: Selected as the web framework due to its flexibility and rapid application development capabilities.

Flask-SQLAlchemy: Integrated to manage the application's database interactions efficiently.

Flask-Mail: Incorporated to streamline the process of sending booking confirmation emails, thereby improving user engagement.

Bcrypt: Employed for password hashing, enhancing the application's security.

The choice of Flask as the web framework was driven by its lightweight nature and seamless integration with various extensions. Flask-SQLAlchemy was the logical choice to ensure efficient data management. The integration of Flask-Mail played a pivotal role in delivering a smooth user experience through timely and automated email confirmations. Additionally, Bcrypt was implemented to ensure robust protection for user passwords.

Database Schema Design

Table: bookings

id: An INTEGER column serving as the primary key with the AUTOINCREMENT attribute to guarantee unique booking identifiers.

showid: A TEXT column that stores the ID of the show for which the booking is made, serving as a foreign key referencing the "id" column in the "shows" table.

user: A TEXT column that holds the username or identifier of the user making the booking.

seats: An INTEGER column recording the number of seats booked.

Constraints:

A FOREIGN KEY constraint on the "showid" column, referencing the "id" column in the "shows" table.

Table: shows

id: An INTEGER column serving as the primary key with the AUTOINCREMENT attribute to ensure unique show identifiers.

name: A TEXT column that stores the name or title of the show.

seats: An INTEGER column indicating the total number of available seats for the show.

price: A NUMERIC column storing the ticket price for the show.

ratings: A NUMERIC column representing the show's ratings or rating score.

tags: A TEXT column that may store tags or labels associated with the show.

theatre: A TEXT column that stores the name of the theatre where the show is held.

place: A TEXT column indicating the location or place of the show.

Table: users

sid: An INTEGER column serving as the primary key with the AUTOINCREMENT attribute, ensuring each user has a unique identifier.

mail: A TEXT column storing the user's email address.

username: A TEXT column storing the username.

hashp: A TEXT column storing passwords in hashed form, enhancing security.

phone: A TEXT column storing the phone number.

Table: admin

This table is identical to the 'users' table, differing only in the type of user data stored, as it pertains to administrators.

Architecture and Features

The Ticket Booking System adheres to the well-established Flask application structure:

Controllers: Responsible for handling routes and views.

Templates: Comprising HTML files for rendering dynamic views.

Database: Serving as the repository for all application data.

Bootstrap 5: Utilized for styling the user interface.

Implemented Features

User Registration and Authentication: Users can create accounts and securely log in.

Show Listing and Ticket Booking: Users can browse available shows and book tickets.

Administrator Panel: Administrators can effectively manage show information.

Booking Confirmation Emails: Users receive automated confirmation emails upon booking tickets.

Video

https://drive.google.com/file/d/1UIWI6hKeC3SqRzynfynd3aYMbsdw_DJ4/view?usp=sharing