Author

Aditya Singh
22f1000873
22f1000873@ds.study.iitm.ac.in

My name is Aditya Singh. I am a student of Diploma level at Indian Institute of Technology, Madras. I have keen interest in Machine Learning, Deep Learning and Artificial Intelligence.

Description

My project is ticket booking , ticket reservations for shows. The project involves sending email reminders to users based on their booking activities. It utilize the Flask framework for building a web application, SQLAlchemy for database interaction, Celery for task scheduling and background job processing, and Gmail's SMTP server for sending email notifications.

Technologies used

flask: Flask is a web framework which is used as backend server for this application
flask_jwt_extended: flask_security module is used to control user access to applications through proper login framework. In-built default Token based authentication mechanism is used to secure api calls.
flask_SQLAlchemy: flask_SQLAlchemy is a flask extension that uses SQLAlchemy to connect to the database server
flask_restful: flask_restful is extension of flask that helps to add support for APIs
Vue.js: is a frontend framework built on javascript. Vue.js is used for frontend UI design.
redis: redis is an in-memory key-value pair database. In this application, redis is used for caching, web service broker to host async jobs using celery.
Celery: celery is used to handle user triggered async tasks, daily reminders, monthly reminders, sending mails etc.

DB Schema Design

https://drive.google.com/file/d/18us7t3DGZvoQfSsWsEF1L2ltIl_4WYEy/view?usp=sharing

API Design

API design is described in api.yaml. APIs are created for reading user information, retrieving authentication tokens and signing in to the application, creating new theater shows, editing theater shows and deleting theater shows.

Architecture and Features

This project has a python file named “app.py” that launches the applications. Using flask_restfull, APIs are designed that performs various tasks pertaining to CRUD applications and other utility tasks such as sending emails. Celery is used to create and execute asynchronous tasks. Redis plays an important role as a message broker and it is also used for caching.This application behaves as a single page application. Vue.js framework is used to create this dynamic single page application. Vue.js receives the data from the database by making API calls to the server and updating in the frontend.

Video

https://drive.google.com/file/d/1e3rYsSM0a1TFRrf84u-TVsJ-J3whyHsL/view?usp=sharing