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## Description

Ticket Booking App is a platform to allow users to book tickets of shows at venues. The shows and venues are created and managed by an admin. Users can also search and filter shows based on venue place, show rating and show tags.

## Technologies Used

1. Flask – For backend server and application code.
2. SQLite and SQLAlchemy - For data storage.
3. Bootstrap and Jinja2 templates - For generating and styling HTML.
4. Matplotlib and numpy libraries – For generating pie charts for admin's summary view.

## DB Schema Design:

The following are the DB tables with columns and constraints. Each table has a unique identifier (id as primary key).

- Venue.  
Columns:
  - venue\_name: Name of venue (Non-Nullable)
  - venue\_place: City where venue is located (Non-Nullable)
  - venue\_location: Location where venue is located (Non-Nullable)
  - venue\_capacity: Capacity of venue (Non-Nullable)
- Show:  
Columns:
  - show\_name: Name of show (Non-Nullable)
  - show\_rating: Rating of show(Non-Nullable)
  - show\_start\_time: Start time of show(Non-Nullable)
  - show\_end\_time: End time of show(Non-Nullable)
  - show\_price: Price of show(Non-Nullable)
  - show\_tags: Tags/genre of show(Non-Nullable)
  - show\_venue\_id: Venue\_id hosting the show (Foreign key, Non-Nullable)
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- Booking:  
Columns:
  - booking\_tickets\_booked: Number of tickets booked (Non-Nullable)
  - booking\_show\_id: Show\_id of show booked (Foreign key, Non-Nullable)
  - booking\_user\_id: User\_id of user who booked(Foreign key, Non-Nullable)

## API Design:

APIS have been for the following:

- CRUD operations for venue
- CRUD operations for show
- READ and CREATE APIs for bookings

## Architecture and Features:

### Architecture:

The python code for the project is organized into 2 files –

- App.py: It contains the startup code and the logic for all APIs implemented
- Models.py: It defines all the tables that need to be created for the project.

There are 2 modules as well:

- static: It contains summary\_pages directory which contains summary report images.
- templates: It contains the html files for each route.

### Features implemented:

1. User registration and login.
2. Admin login
3. Creation, updating and deletion(with confirmation) of venues by admin.
4. Creation, updating and deletion(with confirmation) of shows by admin.
5. Summary view for admin on a per show basis.
6. User view of all shows available.
7. Shows can be filtered based on venue location, show rating and show tags
8. User can book many shows from many venues, which are not houseful.
9. User can book multiple tickets for a show at a given venue.
10. Houseful shows cannot be booked.
11. Listing of user bookings.
12. Input form validations for appropriate values.
13. Login validation based on credentials.
14. Register user validation based on username uniqueness check.

### Video Link:

[https://drive.google.com/file/d/1-7gE6JdNK0xdUUE\\_C\\_5j6z2QhfqhXIL0/view?usp=share\\_link](https://drive.google.com/file/d/1-7gE6JdNK0xdUUE_C_5j6z2QhfqhXIL0/view?usp=share_link)