

# Project Report

## Author

Name: Abhilakshya Mehta

Roll number: 21f1002251

Email: 21f1002251@ds.study.iitm.ac.in

A Data Science student who is from Jodhpur, Rajasthan and pursuing dual Bachelor's degrees with a consistent decent academic record. Proficient in JAVA (Core), Python Programming.

## Description

The project is a web application for booking show tickets. Users can view the show list with their venue, booking details and book multiple numbers of tickets. Admin can manage venues, shows. Users can book multiple tickets of the show.

## Technologies used

The project is developed using following technologies:

- HTML : To create web pages.
- CSS : To design the web page for aesthetics looks.
- Bootstrap : It is a CSS framework used to design web pages for aesthetic looks.
- Flask : Python based web framework to implement web functionalities.
- Flask SQLAlchemy: It is used for interacting to database
- Flask Login: This module is used for user/admin session management. And functionalities like login, logout, etc.
- Datetime (python in-built library): This module is used to handle date, time related features like show date/time.
- SQLite3 database is used for database management.

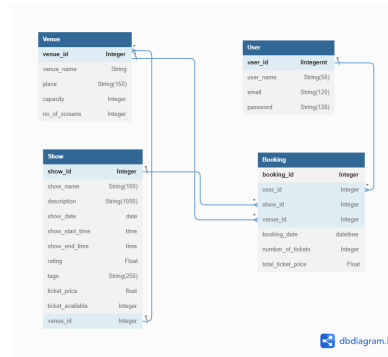
IDE : Pycharm Community Edition

## DB Schema Design

This database consists of four tables -

- Venue - This table contains Venue details (like venue\_id, name, place, capacity),
- Show - This table contains Show details (like id, name, timings, description, ticket price, etc) and foreign key to Venue table to assign Venue to show.
- User : This table contains user details. This is used to keep user data and it contains one default entry for admin.
- Booking: This table contains the booking details of shows booked by User. It also has foreign keys to table User, Show, Venue.

## ER Diagram of Database



## Architecture and Features

The project follows the Model-View-Controller (MVC) architecture.

The main.py file is used to run the flask application.

The instance folder contains sqlite database.

The application folder contains static, templates(contains html files) folder and contains files:

The Models.py file contains the database schema, which is defined using SQLAlchemy.

The Controllers.py file contains the routes for the web application.

The \_\_init\_\_.py file contains code used to initialise the web application.

The templates folder contains html files used in web application.

The requirements.txt file contains all the required modules to run this application.

Login Feature is implemented for both Admin and Users with the help of Flask-Login module.

Register page is implemented for Users only as there is default entry in the database for admin.

Admin dashboard is where Admin can manage Venues and Shows and CRUD implemented on both venues and shows. Constraints are also added such as Admin cannot create shows in past time, cannot assign multiple shows to the same venue at same time.

Ticket booking page allows Users to book multiple numbers of tickets to shows. And booked shows are recorded and present in the Booking Details link. Basic search functionality is also added so user can search shows as desired

## Project Structure

```
abhilashya@abhilashya-virtual-machine: ~/Desktop$ tree 'Ticket Show Project'
Ticket Show Project
├── application
│   ├── controllers.py
│   ├── init.py
│   └── models.py
├── static
│   └── home_background.jpeg
├── templates
│   ├── admin_login.html
│   ├── base.html
│   ├── booking_details.html
│   ├── index.html
│   ├── login.html
│   ├── register.html
│   ├── select_venue.html
│   ├── ticket_booking.html
│   ├── user_login_register.html
│   └── venue_show_management.html
├── instance
│   └── database.sqlite3
├── main.py
└── requirements.txt
4 directories, 17 files
```

## Video

<https://drive.google.com/file/d/1rAKUiTeO8gYZRuLauR1kJnXjxQmiFCHp/view?usp=sharing>