

Backend Assignment - BookMyShow

DATABASE DESIGN

CITY

- id
- name
- regional_language

MOVIE

- id
- name
- cast
- director
- language
- genre
- release_date

THEATRE

- id
- name
- address
- contact
- city_id
- city
- no_screens
- currently_playing: [movie1_id, movie2_id]

SHOW

- show_time
- date
- screen_id
- movie_id

- theatre_id

USER

- id
- name
- email
- password

BOOKING

- id
- user_id
- show_id
- seats_numbers: []
- seat_type

SCREEN

- id
- theatre_id
- name

SEATING

- show_id
- seats : {
 type:{
 seat_number:0/1
 }
}

0 -> Not booked
1 -> Booked

Tech Stack Used:

- Flask Framework for APIs
- MongoDB for database

Assumptions for Database Design and Data Population:

- Each theatre has a fixed layout
 - dress_circle_seats
 - A1 - A10
 - B1 - B10
 - C1 - C10
 - gold seats
 - D1 - D10
 - E1 - E10
 - F1 - F10
 - G1 - G10
 - H1 - H10
 - platinum seats
 - I1 - I10
 - J1 - J10
 - K1 - K10
 - L1 - L10
 - M1 - M10
 - lounge seats
 - N1 - N10
 - O1 - O10
- No screens per theatre (randomized between (1, 3))
- Screens are given names as SCR-1, SCR-2, SCR-3, ...
- Show times are declared as per the no. of screens
- Assuming each movie takes around 3 hrs + buffer 30/40 min before the next show playing on that screen

THEATRE WITH ONE SCREEN:

SCR - 1 show times:

- 09:30 AM
- 01:10 PM
- 04:50 PM
- 8:15 PM

THEATRE WITH TWO SCREENS:

SCR - 1 show times:

- 09:30 AM
- 12:15 PM
- 03:30 PM
- 06:45 PM
- 10:00 PM

SCR - 2 show times:

- 10:15 AM
- 01:10 PM
- 04:40 PM
- 07:45 PM

THEATRE WITH THREE SCREENS:

SCR - 1 show times:

- 09:30 AM
- 12:45 PM
- 04:40 PM
- 08:15 PM

SCR - 2 show times:

- 08:45 AM
- 12:15 PM
- 04:00 PM
- 07:10 PM

SCR - 3 show times:

- 09:00 AM
- 12:05 PM
- 03:30 PM
- 06:50 PM
- 10:15 PM

- For the data population in the mongoDB,
 - The number of screens per theatre is `randomint(1,3)`
 - Movies with the release date in August and September are used for populating shows for the theatres - recent movies list
 - Each theatre can play `randomint(1,3)` number of movies
 - For each show, movie is selected randomly from list of recent movies