



Department of Computer Science and Engineering PES University, Bangalore, India

Python for Computational Problem Solving - UE24CS151A

Problem Statement: Level-2 (ORANGE)

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Date: 9th December, 2024
Timing: 1:45PM to 4:00PM

Movie Ticket Booking System

Design and implement a simple movie ticket booking system with a graphical interface that allows users to select movies, choose showtimes, book tickets, and view confirmation details based on real-time availability.

1. Build the GUI

- a. Use tkinter to create an intuitive graphical interface where users can:
- b. Select a movie from a dropdown list.
- c. Choose the date and time from a dropdown menu.
- d. Specify the number of tickets they wish to book.

2. Integrate Movie Data

Display movie details (name, showtimes, ticket availability, and price) by loading data from a CSV file (movies.csv).

3. Booking Logic

On submission of user preferences:

- a. Calculate the total cost based on ticket quantity and price.
- b. If the selected show is unavailable or preferences cannot be met, display an appropriate message.
- c. If seat availability is lower than the requested tickets, give an appropriate notification to the user.

4. Additional Functionalities

- a. Provide a reset option to clear user selections.
- b. Confirm bookings by updating the available seats in the CSV file and displaying a confirmation message with:
 - Movie name, date, and time.
 - Number of tickets booked.
 - Total price.

Deliverables:

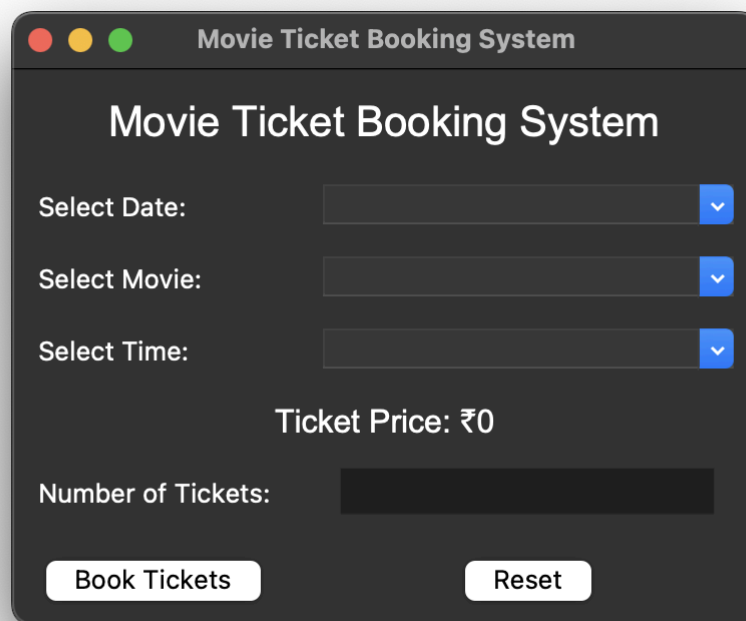
The complete code in a .py file.

Tools/Technologies:

Language: Python 3.10 or above. **GUI Framework:** tkinter. **File Handling:** csv.

Sample CSV File (movies.csv):

Movie_Name	Date	Time	Available_Seats	Ticket_Price
Avatar	26/11/24	20:00	72	150
Inception	29/11/24	18:00	94	200
Titanic	25/11/24	10:00	177	180

Sample Output

Movie Ticket Booking System

Movie Ticket Booking System

Select Date:

Select Movie:

Select Time:

Ticket Price: ₹0

Number of Tickets:

Book Tickets Reset

Movie Ticket Booking System

Movie Ticket Booking System

Select Date:

2024-11-25

2024-11-26

2024-11-27

2024-11-28

2024-11-29

Select Movie:

Select Time:

Tic

Number of Tickets:

Book Tickets

Reset

Movie Ticket Booking System

Movie Ticket Booking System

Select Date:

2024-11-25

Select Movie:

Titanic

Select Time:

Ticket Price: ₹0

Number of Tickets:

Book Tickets

Reset

● ● ● Movie Ticket Booking System

Movie Ticket Booking System

Select Date:

2024-11-25

▼

Select Movie:

Titanic

▼

Select Time:

10:00

▼

Ticket Price: ₹180

Number of Tickets:

2

Book Tickets

Reset

Movie Ticket Booking System

Movie Ticket Booking System

Select Date: 2024-11-25

Select Movie: Titanic

Select Time: 10:00

Ticket Price: ₹180

Number of Tickets: 2

Book Tickets

Reset



Booking Confirmed!

Movie: Titanic
Date: 2024-11-25
Time: 10:00
Tickets: 2
Total Cost: ₹360

OK

Movie Ticket Booking System

Movie Ticket Booking System

Select Date:

2024-11-26



Select Movie:

Avengers



Select Time:

13:00



Ticket Price: ₹200

Number of Tickets:

500

Book Tickets

Reset



**Only 62 seats are available.
Please adjust your booking.**

OK