

TICKETMASTER

A ticket booking system

CSC-552 Mini Project

Group 5

Group Member details

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|----|---------------------|-----------------|
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| 3. | Suraj Raj | <u>21CS8142</u> |
| 4. | Rishav Mondal | 21CS8143 |
| 5. | Aiman Aisha | 21CS8144 |
| 6. | Aditya Singh Bisht | 21CS8145 |
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| 8. | Aparajita Paul | 21CS8147 |
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Problem Description

TicketMaster, A user-friendly ticketing platform for events (theaters/concerts/Stadium). It offers a simple text-based interface, supports registration ,movie booking, seat selection and visualization, payment, and dynamic pricing. The focus is on ease of use and attractive deals/packages which is handled by the owner .

An API which can be used to change the used cases of the application without changing much of the functionality.The application can be capable of modifying some of the policy as per the use cases depending upon the festival , region , sparsity of seats. Application should keep the record authenticated event managers and also the clients .

TICKETREVENUESYSTEM

What is Your Role?

1. Admin
2. Customer

Select an option: 2

What do you want to do?

1. Book Tickets
2. Cancel Tickets
4. Quit

Select an option: 1

What do You Want to Watch?

1. Oppenheimer

Time Slots:

- 25 September 2023, 1:00 pm (Screen A)
- 25 September 2023, 9:00 pm (Screen A)
- 26 September 2023, 1:00 pm (Screen B)

2. Barbie

Time Slots:

- 24 September 2023, 1:00 pm (Screen A)
- 25 September 2023, 9:00 pm (Screen B)
- 26 September 2023, 3:00 pm (Screen A)

Select an option: 2

BARBIE

What is Your Preferred Time Slot?

1. 25 September 2023, 1:00 pm (Screen A)
2. 25 September 2023, 9:00 pm (Screen A)
3. 26 September 2023, 1:00 pm (Screen B)

Select an option: 1

Prices:

Economy(Per ticket): INR 200.00

Business(Per ticket): INR 250.00

Premium(Per ticket): INR 300.00

Available Seats (# are booked seats)

-----PREMIUM-----

[A1]	[#]	[#]	[#]	[#]	[A6]	[A7]	[48]	[49]	[A10]	[A11]	[A12]	[A13]	[A14]	[A15]	[A16]	[A17]	[A18]
[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]	[B8]	[B9]	[B10]	[B11]	[B12]	[B13]	[B14]	[B15]	[B16]	[B17]	[B18]

-----ECONOMY-----

[C1]	[#]	[#]	[#]	[C5]	[C6]	[C7]	[C8]	[C9]	[C10]	[#]	[#]	[#]	[#]	[#]	[#]	[#]	[#]
[D1]	[#]	[#]	[#]	[D5]	[D6]	[D7]	[D8]	[D9]	[#]	[#]	[D12]	[D13]	[D14]	[#]	[#]	[D17]	[D18]
[E1]	[#]	[#]	[#]	[E5]	[E6]	[E7]	[E8]	[E9]	[E10]	[#]	[#]	[#]	[E14]	[#]	[#]	[E17]	[E18]

-----BUSINESS-----

[F1]	[F2]	[F3]	[F4]	[F5]	[F6]	[F7]	[F8]	[F9]	[F10]	[F11]	[F12]	[F13]	[F14]	[F15]	[F16]	[F17]	[F18]
[G1]	[G2]	[G3]	[G4]	[G5]	[G6]	[G7]	[G8]	[G9]	[#]	[#]	[#]	[#]	[G14]	[G15]	[G16]	[G17]	[G18]

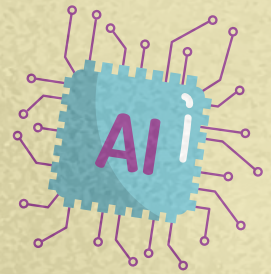
SCREEN

Enter the no of Seats that You Want to Book: 2

Enter Your Seat: A1

Enter Your Seat: G5

Your Ticket is Confirmed! Please Pay at the Counter. Thank you for using our services :)





What is Your Role?

1. Admin
2. Customer

Select an option: 1

What do You want to do?

1. Create a Show
2. Remove a Show
3. Update Prices of a Show

Select an option: 1

Enter Show Name: Barbie

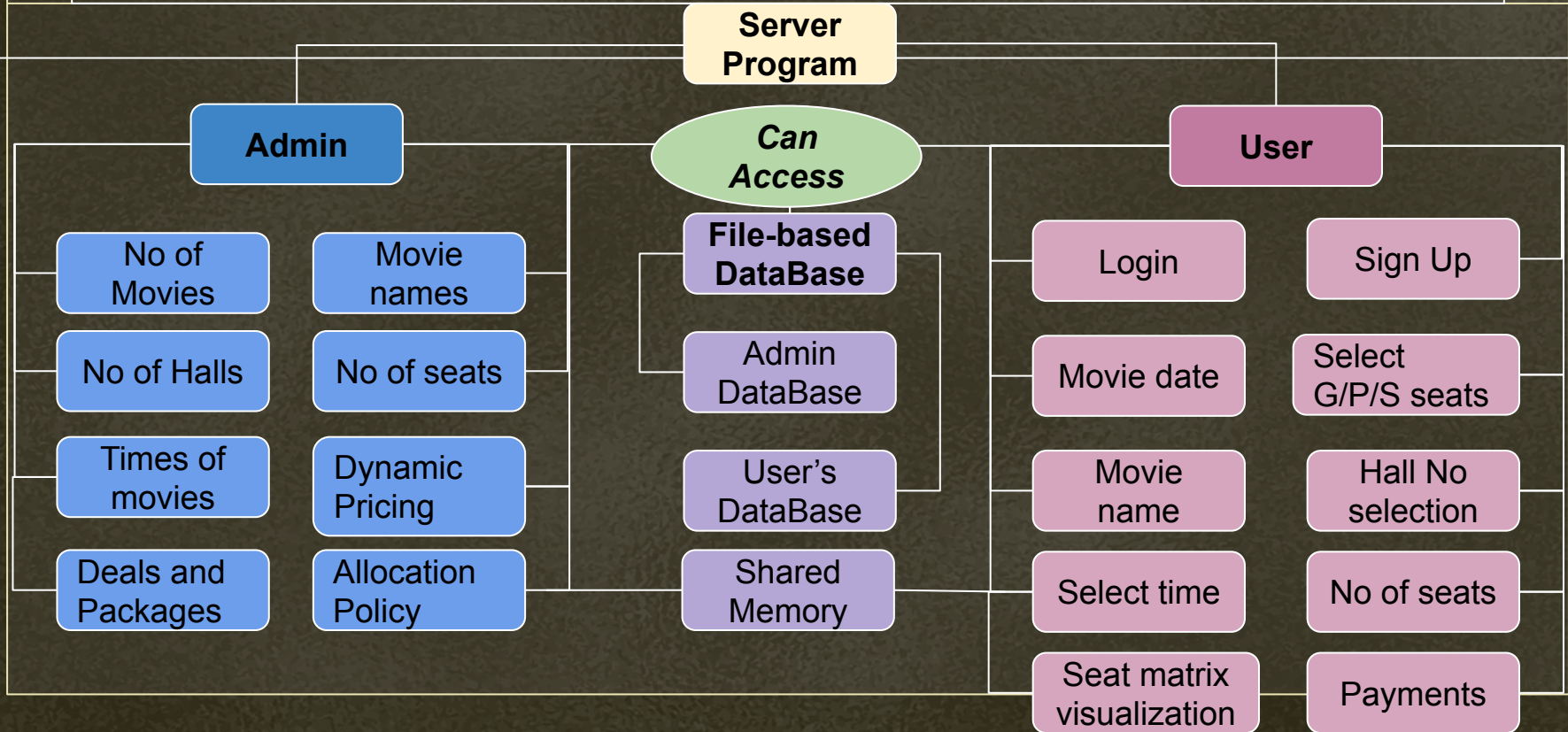
Scheduled Slots:

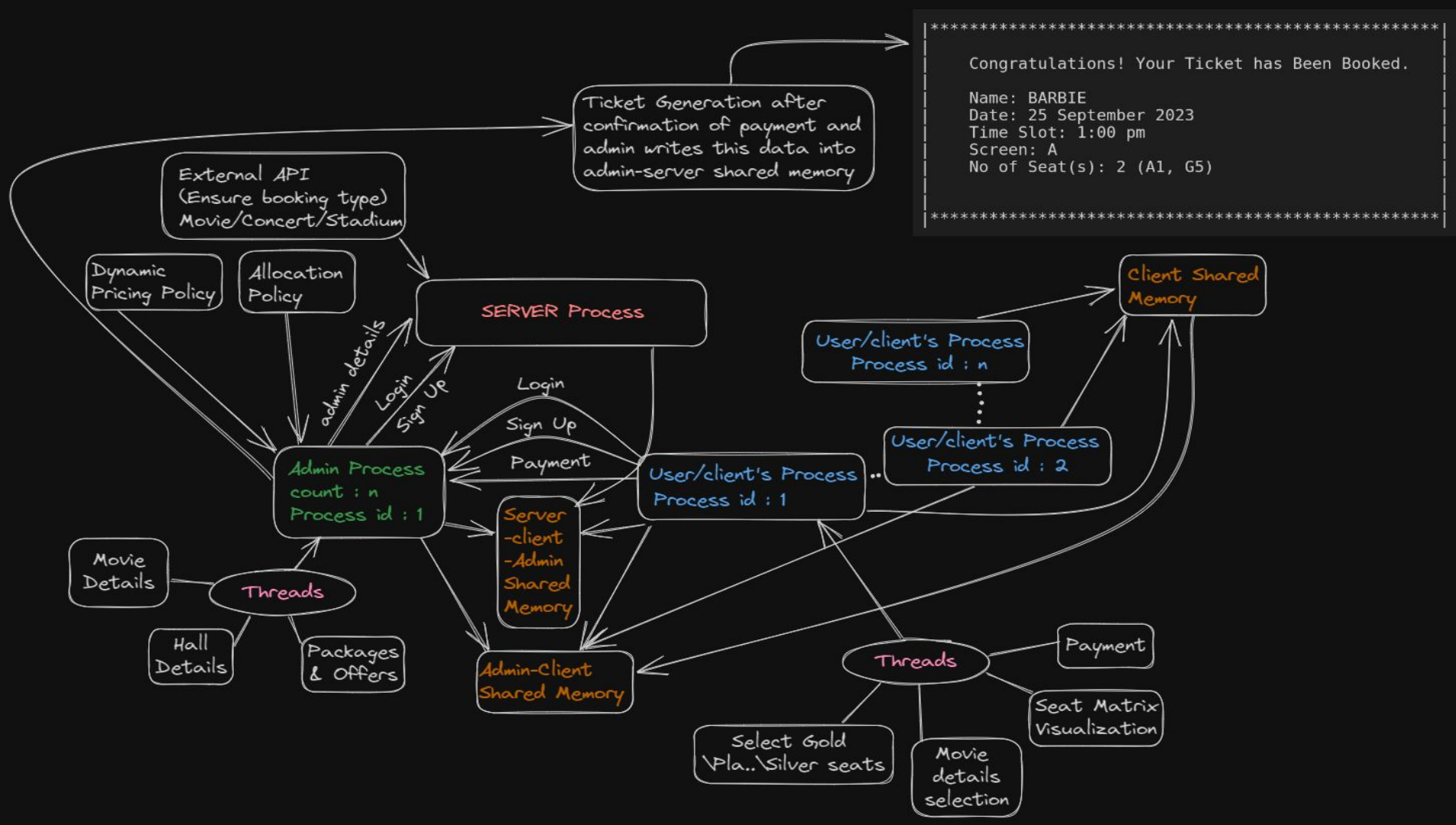
1. 25 September 2023, 1:00 pm (Screen A)
2. 25 September 2023, 9:00 pm (Screen A)
3. 26 September 2023, 1:00 pm (Screen B)

Enter the Slot to be Removed: 1

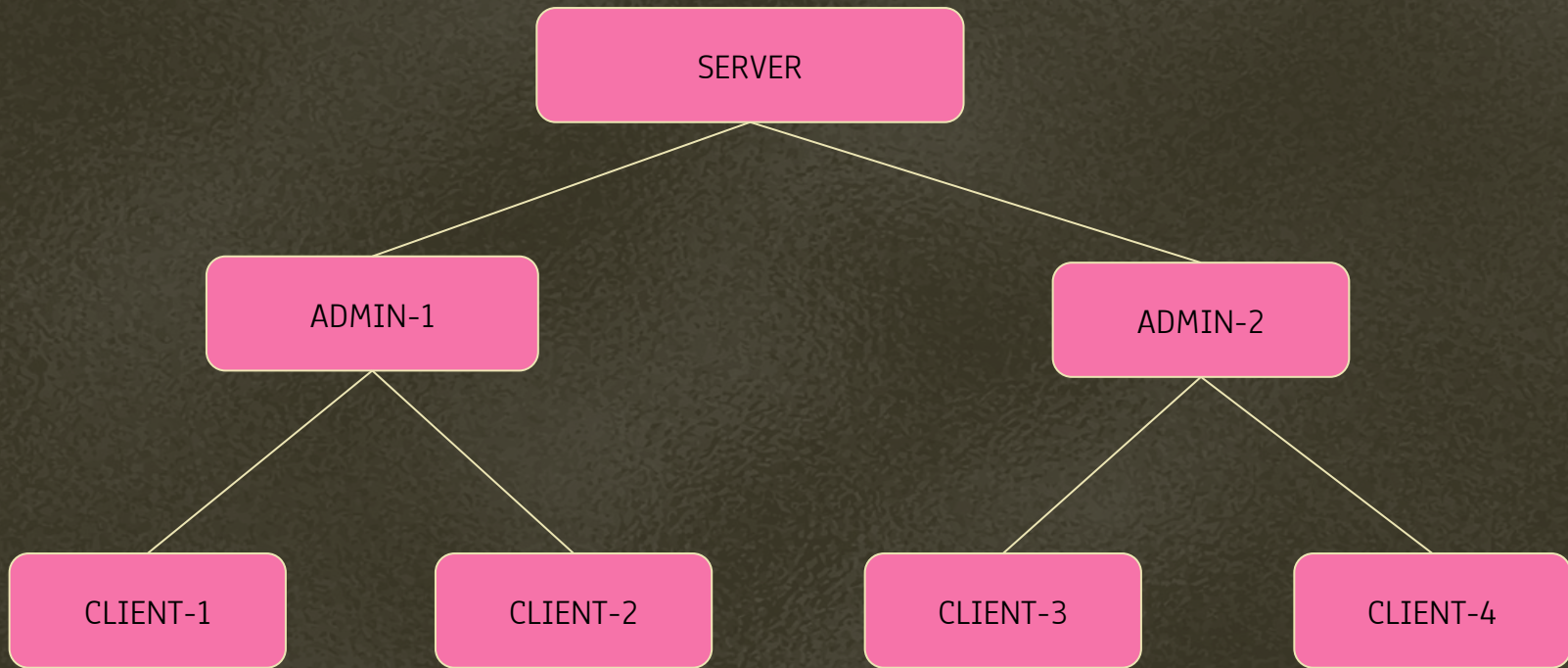
The Slot has been removed.

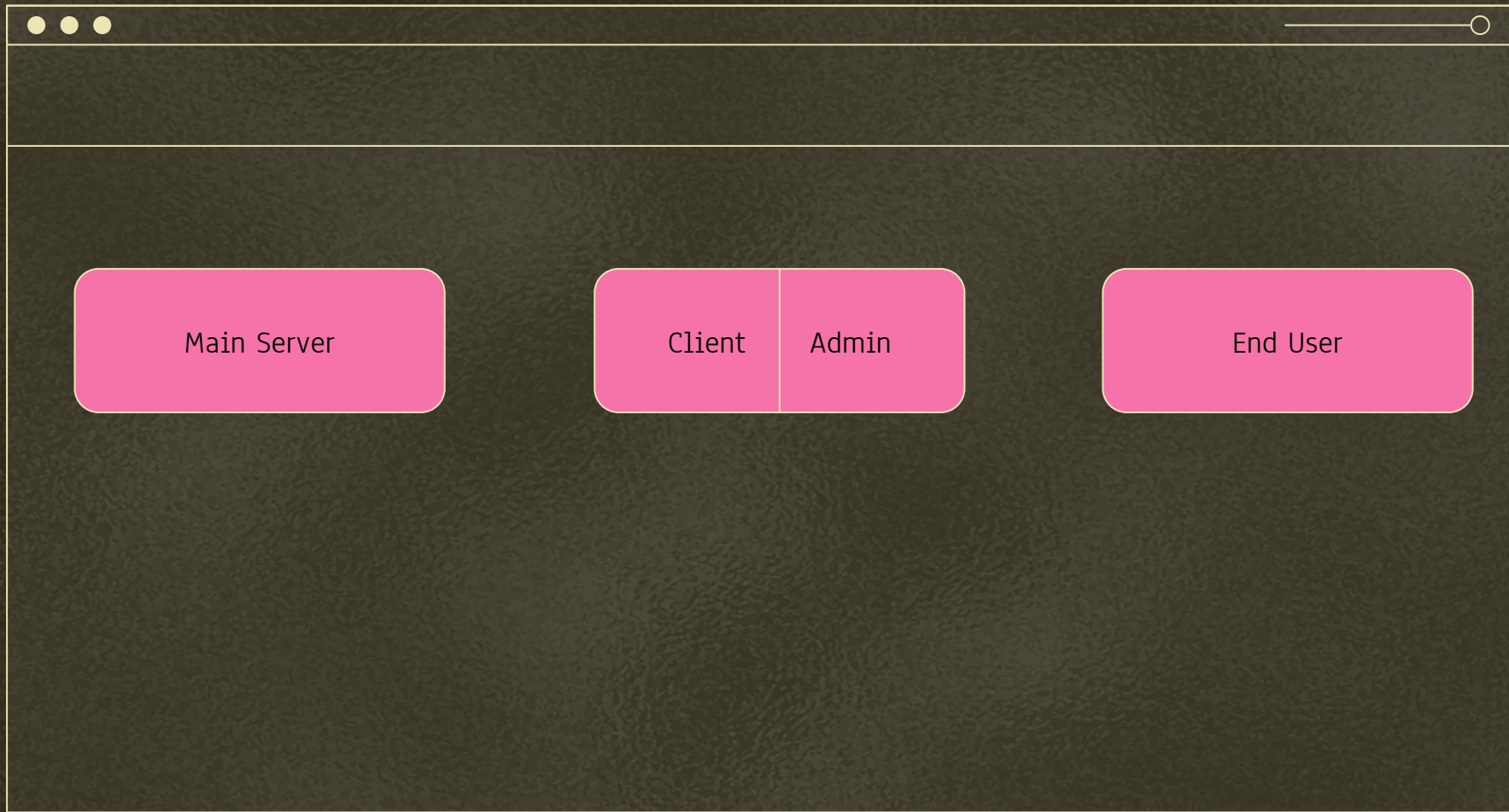
Classes & Modules





SYSTEM DESIGN





OS Features

- **Process:** Server (1) & User (n1) & Admin (n2)
- **Shared Memory:** Files having data of user and data related to Cinema (like movie name, hall no , timing, etc).
- **Threading** : Payment GateWay , Updating the stored data of users , reading seat matrix data from memory ,etc .
- **Text File** : Containing initial data of users and new users, another file for data related to movie ,seats UI , Timing , movie names , regions , movie language etc.
- **Signal Handling** : Sending Signals to the admin for updating the data of user + seats available + payment , etc.
- **Semaphores** : Handling several processes to fetch data from file simultaneously from memory ,updating seat matrix ,writing/reading on/form file

Application Level Features

Multithreading for Task distribution :

- Complex tasks such as reading seat matrix data from memory , handling payment ,etc will be done using multiple threads creations

User/Admin Authentication and Authorization :

- Implement user login and registration to ensure secure access.
- Define different user roles (e.g., admin, customer, staff) with appropriate permissions.

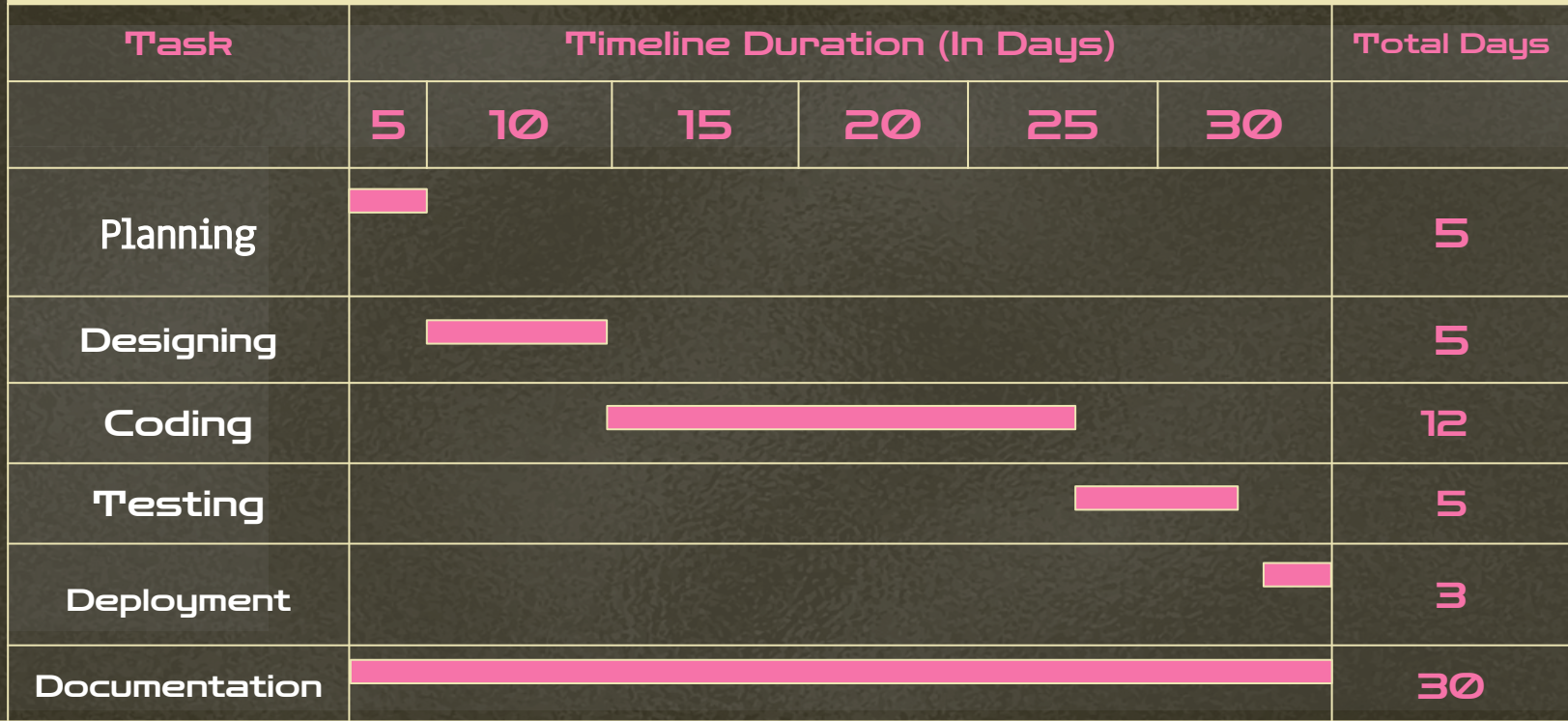
Ticket Booking/ Cancellation/ Rescheduling :

- Search for available seats/tickets based on criteria such as date, place, theatre, seat matrix visualization
- Number of tickets booked determines the additional discounts and free food coupons.
- Dynamic cancellation of ticket or rescheduling of ticket (upto limit)

Load Balancing :

- Arrangement of order of communication is such that server is least contacted by the client and admin, only during login/signup process of admin

Timeline Chart



Individual Roles

- **Subrata Pal:** Implement user registration and login functionality.
- **Komal Singh:** Store theatre, place information in data structures like arrays or vectors.
- **Suraj Raj:** Implementation of booking and reservation logic by modifying flight objects and user records.
- **Rishav Mondal :** Responsible for creating and managing documentation.
- **Aiman Aisha:** Creating a text-based user interface where users can interact with the system.
- **Aditya S Bisht :** Implement basic security measures like password hashing to protect user data.
- **Jithin Siva:** Implementation of functions to read from and write to the data files for data persistence.
- **Aparajita Paul:** Responsible for creating and managing documentation.
- **Manjunath Chithrala :** Validation and Error Handling.