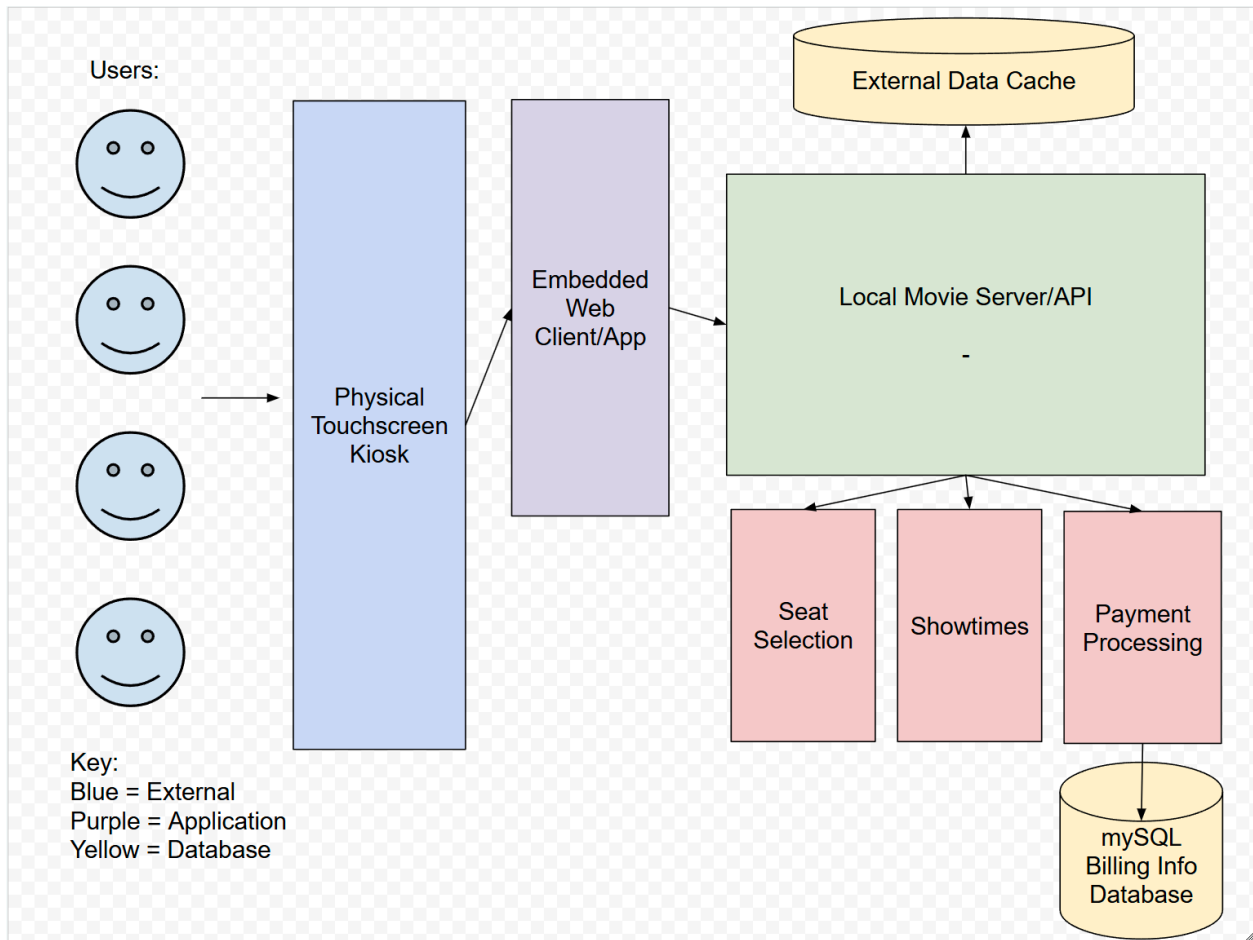
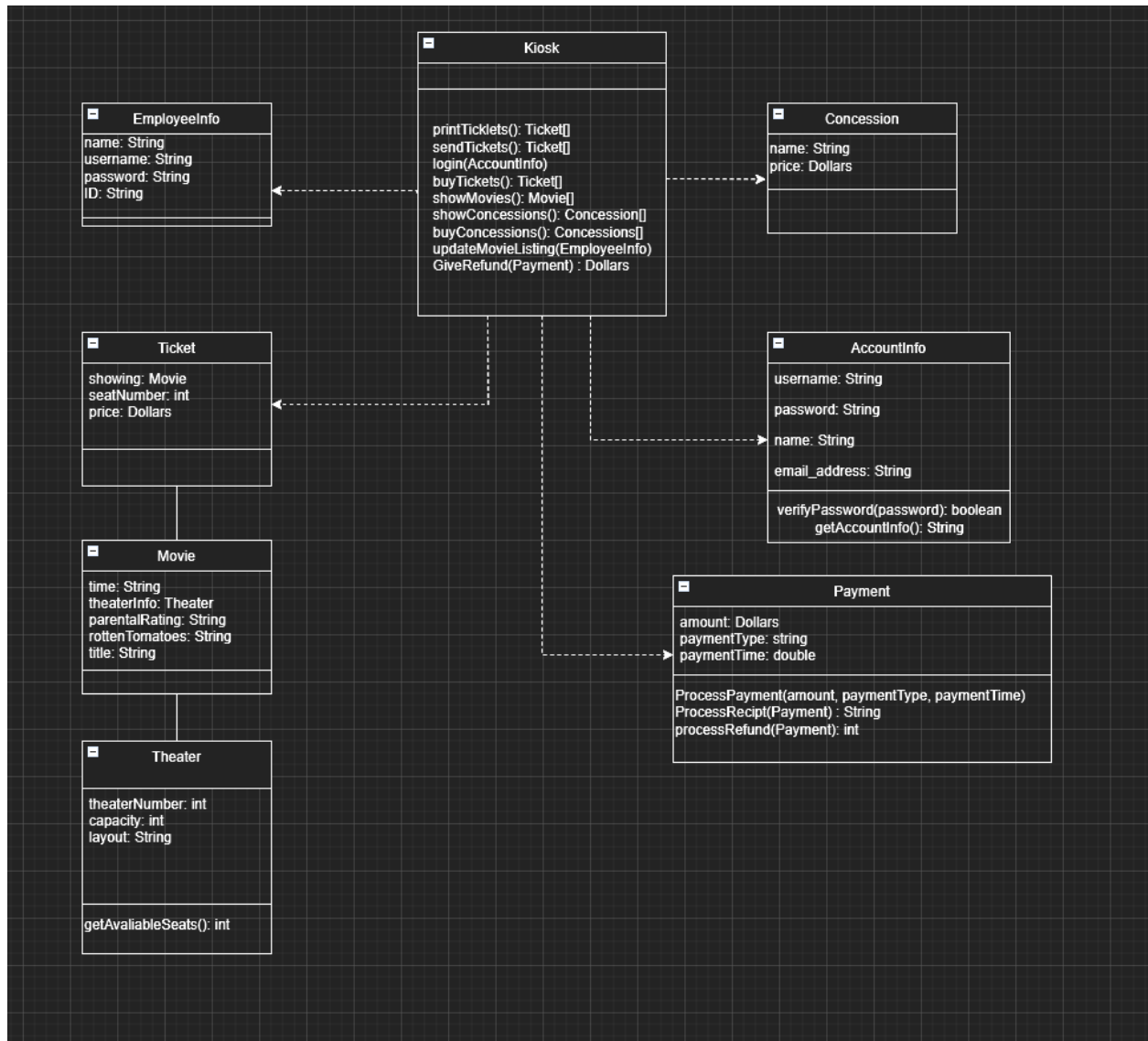


Movie Ticketing Kiosk System

Introduction

I will be talking about the movie ticketing kiosk system. It's a self-service solution that aims to simplify the movie ticket purchasing process for customers visiting theaters. Users can then browse the movies available, select their showtime, and pick their seats right on an interactive touch screen. The system must provide a user-friendly interface capable of handling confirmation of ticket details, selection verification, and payment transfers through several options, such as card payment (credit/debit) and digital wallets. Once the payment has been taken, the kiosk issues a paper ticket or a QR code to be used to gain access. The kiosk also lets you look up showtimes, modify your bookings, and get help if you need it.





Descriptions:

Classes:

EmployeeInfo

Description: This is an employee of the theater.

Attributes:

- name: String - Employee full name
- username: String - The employee login username.
- example: String - Defines the login password for the employee.
- ID: String - The unique identifier of the employee.

Operations:

(No operations are mentioned in the diagram)

Kiosk

Description: The main class for the movie theater kiosk. It handles everything related to ticket sales, concessions, and movie information.

Note: (None specifically mentioned in the diagram)

Operations:

- printTickets(): Ticket[] - This function will generate and return an array of Ticket objects.
- sendTickets(): Ticket[] - Sends the generated tickets (to a printer or digitally).
- login(Accountinfo): Boolean (Implicit) - Input: Accountinfo Object | Task: Try to log in through the instance, returns boolean.
- buyTickets(): Ticket[] - Manages ticket purchasing and returns an array of Ticket objects.
- showMovies(): Movie[] - Returns a stream of Movie objects.
- showConcessions(): Concession[] - Fetches and returns a set of available Concession objects.
- buyConcessions(): Concession[] - This method is responsible for purchasing concessions and returns an array of Concession objects.

- updateMovieListing(EmployeeInfo): Boolean (Implicitly) - An EmployeeInfo object allows updating the movie listings. Returns true or false depending if successful or not.
- GiveRefund(Payment): Dollars - Behind the scenes, this function processes a refund for the given Payment object and returns the amount refunded.

Ticket

Description: A movie ticket.

Attributes:

- showing: Movie - The Movie object associated with the ticket.
- seatNumber: int - The ticket's assigned seat number.
- type: String - The custom type of the ticket e.g. Premium, Economy.

Movie

Description: Represents a movie currently playing in the theater.

Attributes:

- time: String - The showtime of the movie.
- theaterInfo: Theater - The Theater object at which the movie is showing.
- parentalRating: String - The parental rating of the movie (e.g., PG-13, PG, R).
- rottenTomatoes: String - The Rotten Tomatoes score or rating.
- title: String - The title of the movie.

Theater

Description: A theater (screen) for the cinema complex.

Attributes:

- theaterNumber: int - The unique number of the theater.
- capacity: int - The total seating capacity of the theater.
- layout: String - A description of the theater's seating layout.

Operations:

- GetAvailableSeats(): int - Determines the number of available seats in the theater.

Concession

Description: Represents a concession item sold at the theater.

Attributes:

- name: String - The name of the concession item.
- price: Dollars - Price of the item.

Accountinfo

Description: User account details for login.

Attributes:

- username: String - The username that will be used to log in.
- password: String - User login password.

- name: String - The full name of the user.
- email_address: String - User email.

Operations:

- verifyPassword(password): boolean - Verifies the password.
- getAccountInfo(): String - A string representation of the account information.

Payment

Description: Corresponds to a payment that a customer has made.

Attributes:

- amount: Dollars - The payment amount.
- paymentType: String - Type of payment (credit card, cash etc.)
- paymentTime: double - The timestamp of the payment.

Operations:

- ProcessPayment(amount, paymentType, paymentTime): Boolean - This method processes the payment with the provided values. Returns a boolean to indicate success or failure.
- ProcessReceipt(Payment): String - Produces a receipt string of the payment.
- processRefund(Payment): int - Processes a refund for the given payment.

Data Types:

- String: Used for text data.
- int: For integer numbers.
- double: Used for floating-point numbers (like timestamps).

- boolean: A type of value that can be true or false.
- Dollars: A custom type to denote currency values. This is likely a custom class or data type to represent money.
- Ticket[], Movie[], Concession[]: Array or list of respective objects.