

Movie Theater Software Design

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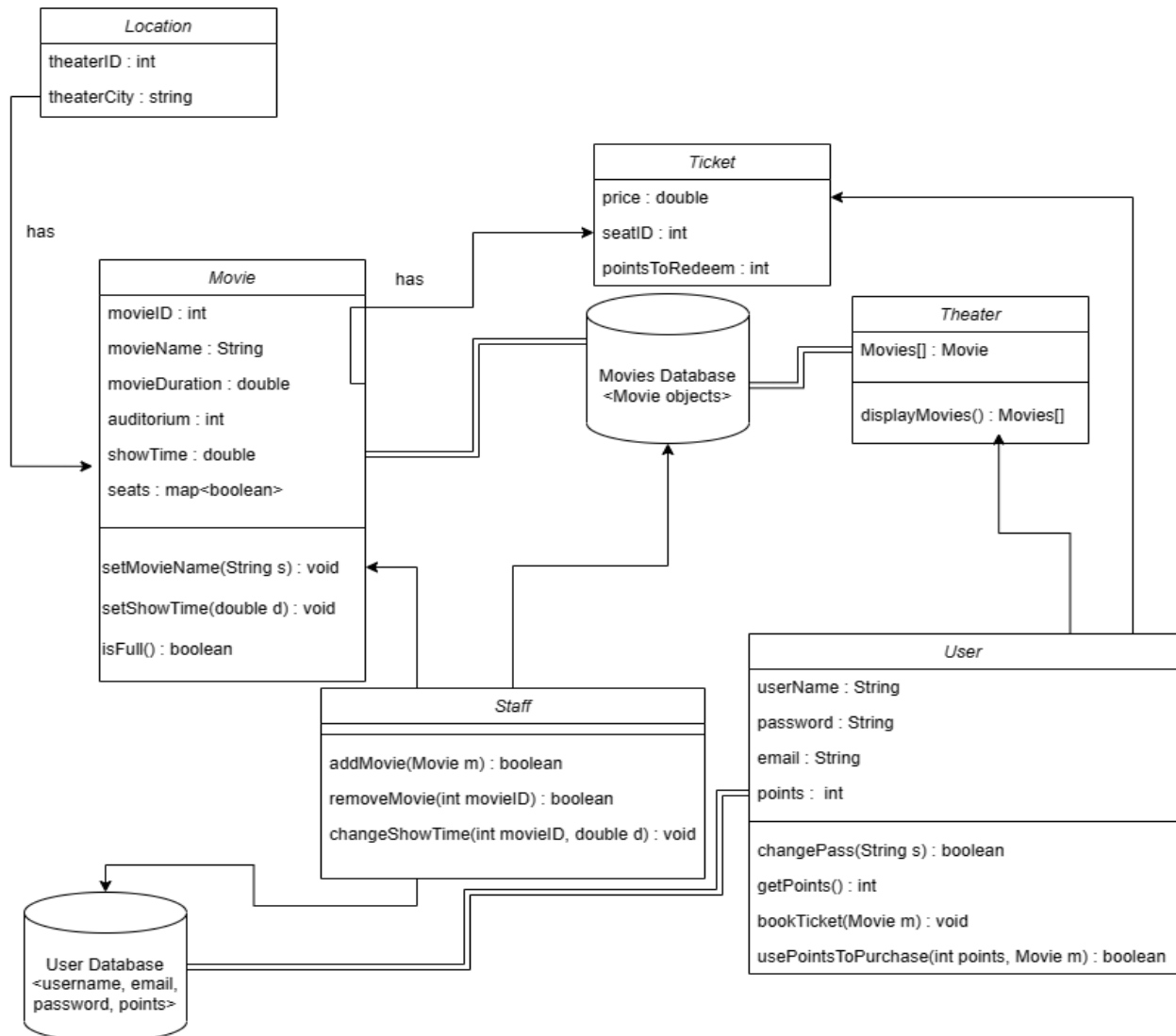
System Description

The movie theater software system is a fully integrated platform created to enhance the functioning of the theater. This system facilitates an effective and hassle-free process for customers to access different services. These services include:

1. Account: Customers can create accounts in order to have an easier experience when using the software as their information such as name, email, and credit card will be saved to their accounts.
2. Ticketing: Customers can purchase tickets online or at the box office using the software.
3. Reservations: Customers can choose to reserve seats for specific showtimes. The reservation system will make sure those seats are held until purchase.
4. Loyalty program: Users that join the loyalty program will have access to special offers and redeemable points on purchases.

Software Architecture Overview

- Architectural diagram of all major components



Data Dictionary

User:

userName : used to log in
 password : used to log in
 email
 points : used for redeeming for movie tickets
 changePass(String s) : method for changing the password
 getPoints() : return the number of points you account has
 bookTicket(Movie m) : method used to book a ticket for a specific Movie Object
 usePointsToPurchase(points, Movie) : return true if your points allow you to get a ticket for the Movie

Staff:

addMovie(Movie m) : allows the staff to add a movie object to the Movie Database
 removeMovie(int movieID) : allows the staff to remove a movie from the Movie database
 changeShowTime(int movieID, double d) : allows the staff to change the showtime of a movie in the database

Location:

theaterID : used to identify theater by exclusive ID
 theaterCity : used to identify city address of theater

Ticket:

price : used to display cost per ticket in USD
 seatID : used to identify theater seat number for assigned seating
 pointsToRedeem : used to display the number of points needed to redeem a ticket

Theater:

Movies[] : array list with available movies stored as elements
 displayMovies() : returns all elements of Movies[] in most recent to oldest order

Movie:

movieID : used to identify the movie's with its unique ID
 movieName : used to identify the movie's name
 movieDuration : used to identify the duration of the movie
 auditorium : used to display the auditorium number where the movie is held in
 showTime : used to display the movie's showtime
 seats : used to get the availability of the movie's seats from the Movies database
 setMovieName(String s) : allow the staff to set the movie's name
 setShowTime(Double d) : allow the staff to set the movie's showtime
 isFull() : returns true if the seats for the movies are full, else returns false

Development plan and timeline

- Partitioning of tasks
- Team member responsibilities

Notes:

- to receive credit for the assignment, each group member must push at least one commit to the GitHub repository.