Project Selected: Movie Theater Management System

Description:

We have discussed the staff being able to add/remove other staff and giving the customer the ability to add/remove tickets, seats and concessions. We are also looking to track concession sales and gross sales for each movie. Tracking metrics for over-all sales of tickets for a given day or tracking different types of tickets sold and similar avenues of reporting. Another report we are looking to print would be information about the current employees and movie titles.

We have added two additional classes being "Seating" and "Concessions". Below is a breakdown of what we are currently thinking with each class.

Project Classes

CUSTOMER
    The customer can begin their experience by proceeding as guest or member and will have a 3 option menu to enter number, continue as guest or sign up. Members will be tracked via telephone number and store names along with their number and DOB. Members will be stored in a 2D array. And have a verification that they are a member or prompt to sign up or continue as guest.
    The customer will then have a menu to purchase movie tickets or concessions.
    Calls:
• Movie
• Seats
• Concessions

STAFF
    The staff menu will prompt the user to present a password to sign in. After they are in, they will be given the option to view an array that shows current employees, their title, and pay rate in a chart with different rows for each employee. The next option if selected will give them the option to add a new employee or remove an old one from the array. The next option will give the employee another table containing the list of movies titles and the option to add or remove a film from the list.
• Enter Password
• Current Employee Information
• Add/Remove Employee
• Change Movie Titles/times

Movie
Movie will be linked with **STAFF** menu. Movie will be a list of sting menus that staff can be able to edit and **CUSTOMERS** can be able to view. This will be linked backed with the report printed for the current movie that are currently being listed for the theater. The information will also be passed to **SHOWTIME** as well along with **SEATING** to be utilized.

- Titles
- Runtimes
- Rating (R, PG etc)
- 3D
- Movie synopsis
- Cost

SCREEN
There will be a fixed number of screens for the theater. The movie and the time associated with each screen will have to be managed and linked to **MOVIE** to pull information and will need to be assigned by **STAFF**. The time could automatically be set based on the runtime parameter set in **MOVIE.** Each movie scheduled on a particular screen will create a new "Showing" array that will pull the current **SEATING** array so multiple screenings for each screen will have its own unique seat selections array. Screen will be tied to **SEATING**. There will need to be a built in function that allows **STAFF** to be able to select a date and time the movie will run and not allow another **MOVIE** to be assigned during the same date and time. Will also need to add a 20 minute buffer between movies for realism (cleaning staff etc). Movies typically air for a full week before the their scheduled times and screens are changed. Screens can be scheduled two weeks into the future.

Payment
The payment menu will give customers a variety of options of how they wish to purchase for their concessions and seating price. This will be linked with both **CONCESSION** and **SEATING**. The customer can now decide which form of currency they wish to pay and the required fields necessary to complete the transaction. For example, if the user is paying with a credit card, they must enter in the numbers listed on the card and will create checks to see if the user is inputting the information correctly. Once the customer does pay, a receipt of the transaction as well as the expected change is shown for cash currency.
- Needs cancellation option in menu.
- Credit Card
- Cash
- Apple
- Gift Card
- Voucher

SHOWTIME
This will be an array that stores the different show times for each film to each screen. It will present a table that stores the show times, the screen number, and movie title associated with it.
- Times

CONCESSIONS

The concession menu will store the items for sale, their prices and the number of units available in a table. The user will be given the option to select different items or multiples of the same item. After selection the total price of the current items will be presented. The total will be run as a parameter to the payment object. The user will also have the option to add or remove products from the listing based on availability or to change the listed price. If an item is out of stock, it will return a message saying as such.

- Menu
- Prices

SEATING

Seating will all have the same number of seats with the exception of IMAX. IMAX is stadium style seating with a lot bigger screen so it will have more seats. The number of seats for each screen will remain fixed and never change. Seating will be tied to each **SCREEN** and will have a different array created for each time a **MOVIE** is scheduled for each screen. During seat selection, the **CUSTOMER** will ideally be able to select seats, which will be temporarily replaced with an x until check out and **PAYMENT** is confirmed. If the seats value = x, there will be a prompt displaying unavailable. If the customer cancels the transaction in payment, the seats will be made available to purchase again. Each array will have to have a designation of IMAX or not. IMAX will be a different cost per seat. 3D will be a different cost per seat.