Cover Page

Movie Ticket Ordering System

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Project Proposal C451

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Problem Statement:

Movie ticket systems are currently outdated, and users are looking for an upgraded and streamlined way to purchase tickets. Upgrading the ticket ordering system to show available movies and their showtimes, select your own seats, and make payments all in one place can lead to higher customer satisfaction and larger profits for movie theaters.

- Objectives of the system
  - Provide users with a quick and straightforward way to book movie tickets from any location
  - Enhance user experience by showing updated seat availability and showtimes
  - Reduce the workload of front-desk staff inside the theaters
  - Offer a secure online payment option to users
  - Tailer user account and show promotions and specials based on their watched movies and orders
- System requirements
  - See all available movie showtimes
  - Select a desired showtime and seat
  - Add tickets to their cart
  - Make secure online payments
  - Receive an electronic ticket after purchase
  - Order food, drinks, and snacks online
  - Receive notifications about upcoming movies and promotions

The movie theater's typical customers would be people who want to see a movie in anyone of our movie theaters. Most of the customers would be teenagers around the age of 15-19

years old. Of course, we can have customers of any age come but teenagers are projected to be our best customers. The second most consistent customer would be children around the age of 10-15. These customers are also expected to bring in additional people like their parents or friends. These are the customers we plan on typically seeing coming into the movie theater.

For the software requirements, we will be using **Java** (could change in the future) as the coding language. We do not require any special tools to create our movie ticket system. We also do not plan to use any third-party software other than an IDE and GitHub to share our code. The IDE we plan to use is Visual Studio Code.

For the hardware requirements, it will not require anything powerful to run. We plan to make this for websites and a phone application, so normal specs for any of these devices will work. Many of our client devices will be phones or a computer to access our software.

For network requirements, we plan to have tough security because transactions take place on our website. To help protect our customers' information, their transactions will be encrypted, and firewalls will be in place to protect their information.

Our development approach for this project will be based on building a comprehensive relational database of movies, movie theaters, and movie showtimes using MySQL. Our Java code will establish a connection with our relational database using an Object Relational Mapping framework through which the application and the database will communicate. User bookings on the application will also be handled by our database schema, where we can keep track of ticket sales and user account information. User interface operations will be developed using JavaScript.

Development Schedule:

Week 1: Requirement Gathering

- Define core functionalities of database schema such as movie listings, user accounts and ticket sales.

Week 2-3: System Design

- Design and develop the database schema.

Week 3-4: Frontend Development

- Develop the user interface for movie searching and ticket booking.

Week 4-5: Backend Development

- Implement backend Java code to handle ticket booking and data storage.

Week 5: Database Integration

- Integrate the application with Java API using ORM framework

Week 6-7: Debugging

- Test, debug, and refine the application.

Week 8: Deployment

- Deploy the application on cloud platform.