Software Requirements Specification

for

MOVIE BOOKING SYSTEM

Version 1.0

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This document outlines the System Requirement Specification (SRS) for a Movie Booking System, providing comprehensive insights into its objectives, functionalities, user interface, and real-world applications. It elucidates the system's operational principles, performance criteria, and user interface elements.This system aims to allow users to browse movies, view showtimes, reserve seats, and purchase tickets.

1.2 Document Conventions

This document adheres to standard conventions, avoiding the use of acronyms and abbreviations. It focuses on clear, detailed descriptions of system functions and features essential for its operation.

1.3 Intended Audience and Reading Suggestions

This document caters to a diverse readership, including cinema hall owners, system designers, system developers, and testers. By perusing this document, readers will gain a comprehensive understanding of the project's objectives and core concepts.

1.4 Product Scope

The Cinema Hall Management System is designed to facilitate the efficient operation of a cinema hall. This system enables customers to book tickets, purchase concessions, and enjoy a seamless movie-going experience. Key features include:

Ticket Booking: Customers can reserve seats and purchase tickets conveniently, enhancing their cinema experience.
Concession Sales: The system streamlines the sale of snacks and beverages, optimizing the revenue stream for the cinema hall.
Payment Integration: Customers can make payments using various methods, including credit cards and digital wallets, seamlessly integrated with the system.
Promotions and Discounts: Patrons can view current promotions and discounts, enhancing their overall satisfaction.
Health Consciousness: The system provides access to nutritional information, fostering awareness of healthier food choices among customers.
Expense and Profit Tracking: The system meticulously records daily expenses and profits, providing valuable insights for business management

2. Overall Description

2.1 Product Perspective

The Cinema Hall Management System empowers cinema hall managers to operate more efficiently and effectively by automating ticket booking, billing, and inventory control processes. The system records transactions and stores the resulting data, facilitating the generation of reports that assist managers in making informed decisions. For example, by analyzing customer attendance during specific time intervals, the manager can determine whether additional staff, such as ushers or concession stand workers, are required. Additionally, the system provides tools for tracking daily expenses and profits. This management system is designed for use in a typical digital cinema hall, ensuring adaptability for restaurant owners seeking to automate their operations.

2.2 Product Functions

The core functions of the Cinema Hall Management System include:
Ticket Booking : Customers can reserve seats and purchase tickets conveniently, enhancing their cinema experience.
Concession Sales : The system streamlines the sale of snacks, beverages, and other concessions, optimizing revenue generation for the cinema hall.
Payment Processing : Customers can make payments using various methods, including credit cards and digital wallets, seamlessly integrated with the system.
Inventory Management : The system keeps track of available and required goods, aiding in inventory control.
Customer Data: Captures and stores customer information for marketing and service improvement purposes.
Feedback Collection : Allows customers to submit reviews and feedback, facilitating continuous improvement efforts.

2.3 User Classes and Characteristics

The Cinema Hall Management System accommodates various user roles and their specific interactions:
Customer: Accesses the system via Wi-Fi to book tickets, purchase concessions, and provide feedback.
Chef: Receives and acknowledges food orders through the system, ensuring timely preparation.
Cashier: Utilizes the system to process customer payments.
Admin: Manages system settings, edits prices, and monitors earnings and expenditures.

2.4 Operating Environment

The system operates in the following environments:
Operating System: Minimum compatibility with Windows XP or Windows VISTA; optimal performance on Windows 7, 8, 8.1, 10.

2.5 Design and Implementation Constraints

Several constraints may impact system performance and cost-effectiveness:
Information Flow: Improved data flow control can enhance system effectiveness and efficiency.
Server Performance: Implementing a faster and more robust database server can enhance overall system performance.

3. External Interface Requirements

3.1 User Interfaces

The user interface, accessible through Android smartphone browsers, prioritizes simplicity for effortless food ordering and feedback submission, ensuring an intuitive experience.

3.2 Hardware Interfaces

Hardware interfaces include bill printers for manual or automated bill generation, enhancing customer service. Orders are prominently displayed on the screen, facilitating efficient staff management.

3.3 Software Interfaces

Operating System: Windows 10/11
Database: MySQL/Oracle
GUI: Visual C# , HTML ,CSS
Tools : MySQL Workbench, Visual Studio 2022, Visual Studio Code, GitHub

3.4 Communications Interfaces

Users are to browse and book movie tickets and snacks through a page which will store the selected data into the database and will be permanently retained.

4. System Features

Through the interface we will provide service to both member and the admin to keep records of movies and their seats availablity , managing accounts , billing . We will create a login page for customers and admins can login and perform their wanted tasks.

4.1 Admin

4.1.1 *Movie Management: Add, edit, and delete movie details, including title, genre, and synopsis.*

4.1.2 *Showtime Management: Create, update, and delete showtimes, including date, time, and available seats.*

4.1.3 *User Management: Manage user accounts, including registration and password reset.*

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4.2 Customer

Browse Movies*: Display a list of available movies with details like title, genre, and synopsis.*
Search Movies*: Enable users to search for movies using criteria like title, genre, or release date.*
Upcoming Releases*: Showcase upcoming movie releases with relevant information.*
Showtime Management:
View Showtimes*: Present a schedule of showtimes for each movie, including date, time, and available seats.*
Select Seats*: Allow users to choose specific seats for a selected showtime.*
Add to Cart*: Provide an option to add selected seats to a cart for later review.*
Review Cart*: Enable users to review their seat selections before finalizing the booking.*
Cancel Reservation: *Allow users to cancel a reservation before payment.*

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The product will operate on a local server, impacting performance.
It should exhibit acceptable initial load times.
Performance is hardware-dependent, with better components leading to enhanced system performance.
Payment processing must be secure, utilizing a POS system.
Separate databases will be maintained for employee data.

5.2 Safety & Security Requirements

The source code will be stored in a configuration management tool for version control and security.
The system is secured, with exclusive admin access to all data.
The system employs HTTPS for enhanced security.
A secure POS system is utilized for payment processing.

5.3 Software Quality Attributes

The system's user interface should be user-friendly, intuitive, and responsive, benefiting both customers and staff.
Dependability is crucial, with minimal downtime and rapid failure recovery to ensure data integrity.
Robust authentication and authorization mechanisms guarantee that only authorized personnel access the system..

6. Other Requirements

Appendix A: Glossary

The required terminologies for better reading purposes are as follows:
SRS: Software Requirements Specification
MySQL: My Structured Query Language
XML: Extensible Markup Language
RAM: Random Access Memory
DBS: Database System
DBMS: Database Management System
GUI: Graphical User Interface
.NET: Network Enabled Technologies
GPA: Grade Point Average
CGPA: Cumulative Grade Point Average
GHz: Gigahertz
GB: Gigabytes
ID: Identification
VC#: Visual C#
px: Pixels