Software Requirements Specification

for

Students' Auditorium Management Software

Version 1.0 approved

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Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This SRS describes the software functional and non-functional requirements for release of Auditorium Management System Software . This software is a standalone application and is designed to handle various types of social and cultural events conduct in the students' auditorium. It explains the functional features of the software, along with interface details, design constraints and related considerations. This software is designed to efficiently manage the various shows conducted in a student auditorium. The SRS is intended for spectators and managers of an auditorium. Unless otherwise stated, all requirements specified here are of high priority and committed for this software.

1.2 Product Scope

The software serves of the following scope:-

- Adding new events as per availability of the Auditorium, and editing events which are already present.
- Allocating Balcony and Ordinary Seats for sale or to offer as complementary gifts. Also fixing the price of different seats.
- Booking and Cancellation of seats for an event.
- Printing Ticket for booking and cancellation of a seat of an event.
- Sending notification for booked and cancelled seats.
- Querying the number of available seats of different classes for an event.
- Querying the percentage of seats booked for various classes of seats and the amount collected in each case.
- Booking available seat for a particular show.
- Creating new authorized sales person's and clerk's log in accounts.

1.3 References

1. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.
2. Software Engineering (CS29006) lectures by Prof. Sudip Misra.

2. Overall Description

2.1 Product Functions

The software serves the purpose of an event manager/organizer for auditoriums. It allows the user to add new events as per the availability of the auditorium and also edit the already present events. The user can also allocate special seats i.e gold and platinum seats on demand with increasing individual charges. User can also decide the ticket price for a particular event depending on the demand. The user can also book new seats as well as cancel booked seats. Each new booking creates a ticket with a seat number, amount payable and a transaction ID. The database containing the record of the booked seats is updated accordingly. User can check number of available and book seats for an event. User can create new authorized sales person's and clerk's log in accounts. It also creates a database for all the transactions. Balance sheets for each event and also for the entire year are also prepared. User can also create new authorized sales person's and clerk's log in accounts.

2.2 Operating Environment

This software is developed in JAVA, running on Windows 10 x64 Architecture. It should also be compatible with 64-bit Operating Systems have JAVA installed and an active internet connect.

2.3 Design and Implementation Constraints

- The hall cannot be overbooked at a time.
- The number of special seats must be fixed for each show.
- Since the software might require a lot of memory all the temporary files created must be cleared after use.
- The database should be implemented using a centralized database management system.

2.4 Assumptions and Dependencies

- Only the Manager can fix event timings.

- It has been assumed that computers and printers have been made available to the salesperson for the booking of the tickets.
- Also at a time only one manager has been appointed for each auditorium.
- This software has been targeted at Windows and Linux Operating System.
- This software requires an internet connection to use and store data in online database.

3. External Interface Requirements

3.1 User Interface

1. **Manager Interface:**
   - Log in
   - Create new personnel by creating new accounts or removing accounts.
   - Decide the timings and total seating capacity of a show.
   - Decide the ticket prices for the various classes of seats.
   - Fix the number of special seats
   - Check out the number of seats booked/available and also the total amount collected by the sales persons.
   - Access the balance sheet.
   - Decide the commission of a sales person depending upon the amount collected by him/her.
   - View all transaction details
2. **Sales Person Interface:**
   - Log in
   - Check which seats are available and display "No seats Available" message if all seats are booked.
   - Book/ Cancel tickets on request by the spectator
   - Print the ticket receipt
3. **Clerk Interface:**
   - Log in
   - To make new Balance Sheet for an event
   - Record the show expenditures
   - Record the amount paid to the artist/performing crew
   - To update the current balance sheets

3.2 Hardware Interfaces

A computer with a monitor, a keyboard and a mouse suffices. A printer must be connected to the computer to print the ticket.

3.3 Software Interfaces

This Software consists of a single user multitasking system. This software does not depend upon any other software except Java but require internet connection for receiving and sending data to online database.

3.4 Communications Interfaces

Internet connection is necessary for storing data in online database so that other users can also share data.

4. Other Nonfunctional Requirements

4.1 Performance Requirements

High level of performance requires high speed network and high level of connectivity.

4.2 Software Quality Attributes

- **Reliability:** The available server must be reliable and the network connectivity for all the computers used by Show Manager, salespersons and account clerks should be proper for smooth flow of all operations and data.
- **Security:** Every user of the software is provided a unique log in ID and a password which is stored in the database hashed by SHA2 algorithm
- **Availability:** The software is available for use anytime with the software installed, provided ticket booking and cancellation are available only within a stipulated duration as set by the Show Manager.
- **Usability**: The interface should be easy to use.

5. Other Requirements

- Each user of the software is required to log in his/her account to perform different activities like sales transactions, bookings, cancellations etc. Depending upon his designation.
- MySQL is required for maintaining the databases.