STUDENTS' AUDITORIUM MANAGEMENT SOFTWARE

SOFTWARE REQUIREMENT SPECIFICATIONS

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

SOFTARE ENGINEERING LAB (CS3074)

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Chapter 1

Introduction

1.1 Purpose

This SRS Document describes the software functional and non-functional requirements of the STUDENTS' AUDITORIUM MANAGEMENT SOFTWARE (SAMS). This software is designed to efficiently manage various social and cultural events conducted in the students' auditorium. This SRS seeks to aid the spectators and auditorium managers. Unless otherwise stated, all requirements specified here are high priority and committed in this software.

1.2 Scope

The Students' Auditorium Management Software (SAMS) consists of the following major functions:

1. Release and maintaining the information of various shows conducted in the auditorium.
2. Price fixing and Allocating Balcony and Ordinary seats for sale or offer as complementary gifts to functionaries or VIPs.
3. Booking of tickets by spectators from authorized sale manager.
4. Printing of tickets with show details and ticket number.
5. Cancellation of Tickets and Refund.
6. Querying the different class of available seats by spectator.
7. Create Log-in accounts for authorized sale persons.
8. Recording all the transaction of sales person using person ID.

9. Querying the percentage of seats booked, amount collected on each class for any show, amount collected by each sales person by show manager.

1.3 Definitions, Acronyms and Abbreviations

1. **SAMS**: used for Students' Auditorium Management Software.
2. **SRS**: used to denote Software Requirement Specifications.
3. **SM**: SM is used to denote Show Manager.
4. **SP**: SP is used to denote Sales Person.
5. **Person ID**: unique ID assigned to each sales person to record their transactions and sales person can login into the SAMS through person ID.
6. **TID**: denoted unique ID that generated after booking a ticket.

1.4 References

1. EEE 830-1998 standard for SRS.

2. Software Engineering Lecture By Prof Sanjeev Patel, NIT Rourkela.

3. Software Engineering lecture by Asst. Prof. Puneet Kumar Jain, NIT Rourkela.

1.5 Overview

The rest of the SRS provides comprehensive specifications of SAMS. Section 2 provides general Description of SAMS including perspective, functional overview, user characteristics and constraints. Section 3 of SRS focuses on functional requirements of SM and SP.

Chapter 2

Overall Description

2.1 Product Perspective

The SAMS is designed to replace the manually driven school's auditorium management system and introduce automation and efficiency. The SAMS will enable the SM to manage and enlist the social and cultural events conducted in auditorium and their details, Fix the prices of the ordinary and balcony seat for booking and assign seats to functionaries, VIPs as complementary gift. The spectators can book their ticket from authorized SP and get their tickets printed with details. The SP can login in to SAMS and all their transactions are recorded. The spectators and SM can query details regarding show timing, booking and payment status respectively.

2.2 Product Functions

The set of functions that are performed by the software are documented below:

2.2.1 Functions performed by spectator:

1. **Query Available of Seats**: spectator can query about the availability of seats of different types for an event at the auditorium.
2. **Booking**: The Costumer provides the sales person with the booking details including the show's name, date and time and the type of seats to be booked.

3. **Cancellation**: The Costumer provides the sales person with the TID of booked ticket details, after which the sales person searches the TID in the SAMS database and creates a cancellation transaction and refunds appropriate amount depending on the date of cancellation and the show date.

2.3.2 Functions perform by Sales Person:

1. **Login into Software**: SP log in to software though person ID and aid the spectator while dealing with auditorium.
2. **Book Seat**: SP can book seats if available for a Costumer after receiving the booking details from the costumer.
3. **Cancel Booking**: SP can cancel booking for a seat if ask by Costumer after receiving the cancellation request from the costumer.

2.3.4 Functions perform by Show Manager:

1. **Enlist the show details**: SM can add new event if auditorium is available for that time. The process includes allocating Balcony and Ordinary Seats for sale or to offer as complementary gifts for functionaries of the students' society or to VIPs for that event. SM also decides the price of different seats for that event.
2. **Checking Show Status**: SM can Query the number of available and booked seats for an event and total amount received by sales person.
3. **View Transaction Detail**: SM can view transactions done by each Sales Person like seat booking or seat cancellation details.

2.3.5 Functions perform by System:

1. **Store Transaction**: System stores all the transaction's info occur during booking and cancellation of seats and it also store the id of that Sales Person.

2. **Print Ticket**: System print ticket that has Costumer id, event info, cost involved, seat info, time of transaction and type of ticket booking or cancellation.

5. Store all the data in an online database if it is connected to internet and keep data up-to-date.

2.3 User Characteristics

2.3.1 Show Manager

The Auditorium has a SM with responsibility of management of every show conducted in the auditorium, fix the prices of each class of ticket and assign tickets to functionaries and VIPs. He also monitors the SP.

2.3.2 Sales Person

SPs are responsible for booking and cancellation of tickets on the request of spectator.

2.3.4 Spectator

Spectator query information about show details and seat availability. He books tickets through authorized sales persons and can cancel it with adequate refund.

2.4 General Constraints

1. There are fixed number of balcony seats and ordinary seats in the auditorium at any given time.

2. An ordinary seat cannot be overpriced than a balcony seat.

3. There exist a limit on number of seats requested by a spectator.

5. Tickets cannot be transferred over to another spectator.

2.5 Assumptions and dependencies

Adequate Hardware resources are available at the end of SP and SM for auditorium managements, printing tickets and provide services to the spectators.

Chapter 3

Specific Requirements

3.1 Functional Requirements

3.1.1 **Query Available Seats**: The spectator gets the information about the availability of each class of seats on scheduled shows.

3.1.2 **Book New Seat**: SP books seats when asked by the spectator. SP checks the availability of seat if available books ticket, else SAMS will produce message to communicate no seats available.

3.1.3 **Cancel Booking**: To cancel a ticket, spectator requests SP using TID. SP cancels the booking and refund to the customer according to the terms and conditions.

3.1.4 **Schedule New Event**: SM creates new event and communicate the event details to the spectators through SAMS.

3.1.5 **Check Event Status**: SM can get the event status including the number of booked seats in each category by querying.

3.1.6 **Query Transaction Details**: The SM can check the transaction of any sales person through his Person ID.

3.1.7 **Fix the price of seats**: SM decides the pricing of each seat by analyzing the demands of that show.

3.2 Non-Functional Requirements

3.2.1 **Performance**: High level of performance requires high speed and real time connectivity.

3.2.2 **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.

3.2.3 **Availability**: The SAMS is available for spectators all the time, provided ticket booking and cancellation are available only within a stipulated duration decided by SM.

3.2.4 **Security**: The SAMS is committed to protect the information of all the spectators provided during ticket booking.

Chapter 4

External Interface Requirement

4.1 User Interfaces

4.1.1 SM Interface

The SAMS screen displays the interface:

1. Schedule the shows.
2. Fix the price of the two class of seats depending on the popularity of a show.

3. Determine the number of balcony and ordinary seats that can be put on sale.
4. Query percentage of seats booked for various classes of seats and the amount collected in each case
5. Query the amount collected by each sales person.

4.1.2 SP Interface

The SAMS screen displays the interface:

1. Log into SAMS.
2. To book tickets on the request of spectators.
3. Cancel the tickets booked by a spectator.
4. Print the ticket with user and show details.

4.1.3 Spectator Interface

1. Query to check availability.

2. options to book, cancel ticket.

4.2 Hardware Interfaces

A computer with a monitor, a keyboard and a mouse are sufficient for SP, SM and spectator. A printer must be connected to the computer to print the ticket.

4.3 Software Interfaces