**Software Requirements Specification Version 1.0**

Annotated Version

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**Students’ Auditorium Management System**

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# Introduction

Students' Auditorium Management Software. Various types of social and cultural events are conducted in the students' auditorium. There are two categories of seats: balcony seats and ordinary seats.

Normally balcony seats are more expensive in any show. The show manager fixes the price of these two categories of seats depending on the popularity of a show. The show manager also determines the number of balcony and ordinary seats that can be put on sale, since for each show some seats are offered as complimentary gifts to different functionaries of the students' society and to VIPs. The show manager also enters the show dates, the number of shows on any particular date and the show timings.

The spectators book their seats in advance by paying the full ticket price to the authorizes sales persons.

The spectators indicate the type of the seat and the computer should print out the ticket clearly showing the seat numbers. The spectators' can cancel their booking before 3 clear days of the show. In this case the ticket price is refunded to them after deducting Rs.5/- as the booking charge per ticket. If a ticket is returned within 3 days and 1 day of a show, a booking charge of Rs.10/- is deducted for ordinary tickets and Rs.15/- is deducted for balcony tickets. On the last day of the show, there is a 50% deduction. The system should let the spectators query the availability of different classes of seats.

The show manager can query any time about the percentage of seats booked for various classes of seats and the amount collected in each case. The show manager creates login accounts for authorized sales persons.

When any authorizes sales person logs in and makes a sale, the computer should record the sales person's id in the sales transaction. This information would help in computing the commission payable to each sales person and also the amount collected by each sales person. These data can be queried by the show manager.

#### Purpose

The purpose of a **Students' Auditorium Management System** is to efficiently manage the booking, scheduling, and utilization of an auditorium or event space, specifically for student-related activities.

#### Scope of Project

The **Student Auditorium Management System** is a web-based solution that simplifies the process of managing and reserving auditorium spaces in educational institutions. Here’s some functions of this product:

1. **Easy Auditorium Booking**Students and faculty can easily book the auditorium for events, classes, meetings, or extracurricular activities through an intuitive platform.
2. **Real-Time Availability Check**Users can quickly check the availability of the auditorium, making it simple to plan events without the hassle of back-and-forth communication.
3. **Reservation Requests**Users can submit booking requests with details like event type, time, and required resources (e.g., projectors, microphones, or seating arrangements).
4. **Administrator Oversight**Administrators have full control to manage all reservations, approve or decline requests, and ensure smooth scheduling, avoiding conflicts and double bookings.
5. **Resource Allocation**The system ensures that all necessary resources (like tech equipment or seating arrangements) are properly allocated and managed, helping events run smoothly.
6. **Notifications and Reminders**Automated notifications keep users informed about the status of their reservations, any approvals, and upcoming events. Users will receive reminders to ensure no details are missed.
7. **Efficient Communication**The system provides a communication channel between students, faculty, and administrators, making it easier to resolve any issues or clarify details regarding bookings and resources.
8. **Centralized Database**A relational database tracks users, bookings, events, and resources, making it easy for administrators to access and manage information. This also supports detailed reporting.
9. **Reduced Administrative Workload**By automating the booking and management process, the system reduces the administrative burden, saving time and effort for staff while ensuring smooth operations.
10. **Improved Transparency and User Experience**The system provides a clear, transparent view of the booking process, making it easier for users to track and manage their reservations and improving their overall experience.

#### Glossary

| **Term** | **Definition** |
| --- | --- |
| Active Article | The document that is tracked by the system; it is a narrative  that is planned to be posted to the public website. |
| Author | Person submitting an article to be reviewed. In case of multiple authors, this term refers to the *principal author*,  with whom all communication is made. |
| Database | Collection of all the information monitored by this system. |
| Editor | Person who receives articles, sends articles for review, and makes final judgments for publications. |
| Field | A cell within a form. |
| Historical Society Database | The existing membership database (also HS database). |
| Member | A member of the Historical Society listed in the HS  database. |
| Reader | Anyone visiting the site to read articles. |
| Review | A written recommendation about the appropriateness of an  article for publication; may include suggestions for improvement. |
| Reviewer | A person that examines an article and has the ability to recommend approval of the article for publication or to  request that changes be made in the article. |
| Software Requirements Specification | A document that completely describes all of the functions of a proposed system and the constraints under which it  must operate. For example, this document. |
| Stakeholder | Any person with an interest in the project who is not a  developer. |
| User | Reviewer or Author. |

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#### Functional Requirement

***1.4.1 Costumer***

Query Availability of Seats : To check availability of seats for an event just click on the event.

***1.4.2 Sales Person***

Sales Person should be logged in to do the following functions :

1. **Book New Seat** : Sales Person books seats when ask by a Costumer. To book seats SP has to choose BOOK SEAT option. If seat is not available then software display a message that seat is not available. If seat is available then SP can book new seat by clicking on the seat. SP has to enter Costumer’s general information for notification.
2. **Cancel Booking** : To cancel a booking SP has to choose Cancel Booking option. Select which Event and then choose seat to cancel the booking.

***1.4.3 Clerk***

Clerk should be logged in to do the following functions :

**Prepare Balance Sheet** : To make new Balance Sheet for an event clerk has to choose new balance sheet and then choose event. To update the current balance sheets choose update.

***1.4.4 Show Manager***

Show Manager should be logged in to do the following functions :

**1.** **Add New Event :** To add new event choose create new event. Choose Date and Slot and enter all the other details.

**2. Edit Event** : Edit an event includes change date, start time, duration, guest list etc. To edit choose Edit and then select Event which you want to edit.

**3. Check Event Status** : To check event status choose Event Status and then choose an event.

**4. Create New Personal** : To create new Personal choose create new personal, then choose type clerk or sales person and then enter information of that personal.

**5.** **View Transaction Details** : To view transactions details choose Transaction and then choose specific sales person or all.

**6. View Balance Sheet** : To view balance sheet choose Balance Sheet and then choose specific event or full year.

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#### Non-Functional Requirement

**1.5.1. Performance Requirements**

**1.** The system should process ticket bookings and cancellations within **2 seconds**.

**2.** The system should handle up to **1000 concurrent users** without performance

degradation.

**3.**  The response time for retrieving show details should not exceed **1 second.**

***1.5.2. Reliability & Availability***

**1.** The system should be available **99.9% of the time** to ensure uninterrupted

booking and cancellation services.

**2.** It should have a **backup mechanism** to prevent data loss in case of a system

failure.

**3.** The system should recover from failures within **5 minutes**.

***1.5.3. Usability Requirements***

**1.** The interface should be **user-friendly** with clear instructions for booking,

cancellation, and querying seat availability.

**2.**  The system should be accessible **on both desktop and mobile devices**.

**3.** It should support **multi-language options** for diverse users.

***1.5.4. Security Requirements***

**1.** Only **authorized salespersons** should be allowed to book or cancel tickets.

**2.** The system should use **role-based authentication** to restrict access to

administrative functions.

**3.** Payment transactions should be secured using **SSL encryption**.

**4.** The system should log all booking and cancellation activities for **audit purposes**.

***1.5.5. Scalability Requirements***

**1.** The system should be designed to handle an increasing number of users as the

college expands.

**2.** It should support **multiple auditorium events simultaneously**.

***1.5.6. Maintainability & Extensibility***

**1.** The system should allow **easy updates** to ticket prices, show schedules, and seat

categories.

**2.** The software should be **modular**, allowing future enhancements like **online**

**payment integration**.

**1.5.7. Data Integrity & Consistency**

**1.** The system should ensure **accurate seat availability updates** to prevent double

bookings.

**2.** Refund transactions should be **recorded and verified** to prevent fraudulent

claims.

#### References

1. Fundamentals Of Software Engineering - Rajib Mall
2. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.
3. SE Lecture SASD (Provided by Prof. Durga Prashad Mohapatra)

#### Overview of Document

The system allows students and faculty to reserve the auditorium for academic or extracurricular activities, avoiding conflicts with a real-time availability calendar. Students can request space for events like club meetings, presentations, or workshops, while faculty can reserve it for classes or seminars. Administrators have the highest access level, managing user accounts, approving or denying bookings, and allocating resources such as projectors, microphones, or seating arrangements. The system enhances transparency by allowing all users to view upcoming bookings, preventing scheduling overlaps.