
Software Requirements Specification

for

Booking A Movie Ticket

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This project is aimed at developing an online movie ticket booking system website for customers. This project also aims at saving time and reducing customer's hustle. A customer can book a movie ticket from home using the Internet (24/7) using any smart device. The customer can book tickets for a variety of movies in various theatres as per availability. They can also see movie statistics and reviews. This document gives the detailed description of the both functional and non-functional requirements proposed by the client.

1.2 Intended Audience and Reading Suggestions

- System Administrator
- Requirements Engineer
- Customer
- Developer
- Movie Theatre Management Team
- Investors

1.3 Product Scope

A customer can book a movie ticket from home using the Internet. The customer will be shown available movies in different theaters. Based on the availability, the ticket will be issued against date/class/show and money will be paid by credit card. It is expected that the credit card transactions will be validated and tickets will be delivered at home or arranged to be collected in person at the theatre. Group bookings will be permitted. Tickets can be booked a week in advance.

1.4 References

- <https://www.slideshare.net/SikandarPandit/online-movie-ticket-booking-system-121793239>
- <https://www.perforce.com/blog/alm/how-write-software-requirements-specification-srs-document>
- <https://www.geeksforgeeks.org/software-engineering-quality-characteristics-of-a-good-srs/>
- Book: Roger S Pressman, Software Engineering: A Practitioner's Approach,

2. Overall Description

2.1 Product Perspective

Waiting in line is tedious work. And during the pandemic keeping some distance between each other has become an important thing. With this software people can book their ticket without going through the trouble of standing in big lines.(This is a stand alone project. It is not derived from other softwares. Its only purpose is for booking tickets.)

2.2 Product Functions

This product has 3 sections:

A. Customer Section

1. The Users can make an account using mobile phone number or Google account or Microsoft Account. They need to put a password so their account remains private. If they forget their password the procedure of recovery of the password will be done on their given mobile number or google account.
2. The Users will have to enter their preferred language of Movies they want to see.
3. The Software will show all the movies that are available in the theatre right now. They can also search for a particular movie saving them the trouble of scrolling down and searching for a particular movie. Users can also search movies by Genre or ratings which will help them select a movie
4. A very brief introduction will be given about the movie, their characters, the actors and actresses who are starring the film etc.
5. If they choose to book a movie there will be a button to select which will say book ticket.
6. After clicking the option you will have to select a city where you actually live. After this all the theatres which show that movie can be seen. Users will have to select from this list.
7. After selecting the theatre user can see all the seats which are booked and all the available seats and can select a seat of his/her liking.

8. After selecting the seats He or she can pay with various available options such as Netbanking, Credit card, UPI etc.
- 9 The user can cancel a seat before 24 hours. The money will be refunded completely.
10. Some ID proof is required at the cinema hall ,the user will be informed about it while booking the tickets. The software will also give a notification on the user's phone number one hour before the show time.
11. Apart from all these users can also see the list of movies which will be coming soon in the theatres.

B. Main Admin Section

1. This is the section which is controlled by the Admin.
2. Admin can add, delete, change data regarding the movies. for example - the admin can change prices of the ticket.
3. The admins will be able to access all the information about the list of tickets booked and if there is any sort of issue he can resolve it.
4. If there are any fraudulent payment methods involved the admin can cancel the ticket and take further actions.
5. The admin has all the accesses of the site and hence the site will be maintained by the admins. The access to the admin account will have high security.

C. Theatre Admins.

1. The theatre Admins is an account which all the theatre authorities will have. Every person cannot book a movie ticket online. Some still prefer to book a ticket at the theatre. So the theatre personal will have a separate Theatre Admin account in which they can make certain changes regarding their own theatres.
2. A particular theatre will have access to only their theatre bookings and movies. They won't be able to change or access the other theatres data.
3. Also they will have limitations to the changes they can make.for e.g. They cannot change the information about the movie that is provided to each movie before the booking page.

2.3 User Classes and Characteristics

Online Movie booking system will be used by the customers, and the main administrator and the theatre admins.

1. The customers will be all people around the World who can Install this software and they can book movies in whichever theatre that is available. Basic knowledge of computers or mobile phones is required for them to book.
2. The customers will have to create an account which will be password protected and to change the password they will either have to enter their old password or OTP i.e one time password will be sent to their Email id or mobile whichever they have provided and using that they can change their password incase forgotten.
3. The main administrator is the Supreme authority. He has access to everything in the software. The admin should have a knowledge of the software, and should be able to resolve some issues, or power failures or other disastrous situations if need be.
4. The theatre Admins will have control over their theatres data. They should have a basic knowledge of some features such as adding a movie, deleting a movie etc.

2.4 Operating Environment

The product will be operating in a Windows, Android, IOS environment using any web browser. The system must have a working internet connection. The basic input devices required are keyboard, mouse and output devices are monitor, printer, Barcode reader etc

2.5 Design and Implementation Constraints

Hardware Configuration:

- Processor: Pentium(R) Dual-core CPU
- Hard Disk: 40GB
- RAM: 256 MB or more

Software Configuration:

- This software package is developed using java as the front end which is supported by the sun micro system. Microsoft SQL Server as the back end to store the database.
- **Operating System:** Windows NT, windows 98, Windows XP
- **Language:** Java Runtime Environment, Net beans 7.0.1 (front end)
- **Database:** MS SQL Server (back end)

2.6 User Documentation

A video documentation will be provided on the main page for those Customers who face some difficulty during the registration or movie booking process. The Theatre Admins will be instructed and properly demonstrated the correct use of the website. Video as well as Documentations will be available on the Internet and Youtube so that people can refer to those. There will be AI automated chat box for people to ask if there are any queries. If the issue is common the chat box will give the reply immediately but if the issue is unique the Admin will have to see the issue and address it.

2.7 Assumptions and Dependencies

1. The applications depend upon the users having access to the internet.
2. It is assumed that the user has enough space on the hard disk to store the Software.
3. It is assumed that the user can read and type English(Are we giving Hindi language option)

3. External Interface Requirements

3.1 User Interfaces

User Interface (UI) is basically how the system would interact with the person using it. The system should be User-friendly and should have an appealing design or a theme.

Various interfaces for the product could be-

1. Login Page
2. Registration/SignUp Page
3. There will be a screen displaying information about the movies that are currently active.
4. If the customers select a specific movie to book then they would be asked to select the seats according to their preference and would be redirected to the payment page.
5. After all transactions are complete the system allows the customer to download the receipt or E-Tickets as a portable document file (.pdf) and it is also sent to the Email address of the customer.

3.2 Hardware Interfaces

The System must be accessible from the internet all the time so that the seats count as well as the movie timings are constantly up to date. And it would require that the system is constantly connected to the internet through various hardware components like Modem, WAN – LAN, Ethernet Cross-Cable, etc. Also hardware components mentioned below would be needed:

1. Keyboard: To accept data from users like password, personal detail, movie details.
2. Printer: To print the ticket that is the movie chosen with date and timing.

3.3 Software Interfaces

The system is a server based application so it requires scripting language like PHP, VBScript etc. The system also requires Database to store any transaction of the system like MYSQL etc. Also the System requires DNS (domain name space) for registering the site on the internet. At last the user would need a web browser to interact with the system.

3.4 Communications Interfaces

The system would use HTTPS protocol and it would also use TCP/IP protocol for security purposes as well as uninterrupted services. If the user/customer has any issues regarding any booking or transaction errors the user can reach out to the 'Technical Team' via E-mail which would be available on the site. Also a

Form would be available on the site if there are any suggestions or complaints the user wishes to convey to the team.

4. System Features

Categorized by functional requirements:

- **Authorization levels (high priority)**

1. **Registration:** Customers should be registered to book tickets. Registered users will have a valid login id that can be used to book tickets.
2. **Login:** Customer logs in to the system by entering valid user id and password for booking the ticket.
3. **Logout:** After the payment or browse the movie, the customer will log out

- **Bookings (high priority)**

1. **Ticket Booking:** Customers can search for movies by name, date, show time and venue. Additional features such as filter search will be provided based on language, genre, venues nearby, etc. Seating charts will also be visible to customers for selecting their desired seats.
2. **Ticket Cancellation:** Tickets can be cancelled anytime before 24 hours. The customer will receive refunds within 6 hours of cancellation. Customers can get 50% refunds if they choose to cancel before 12 hours. Customers won't get any refunds within last 12 hours of cancellation

- **Transaction Handling (high priority)**

1. **Payment:** Customers will have several payment options like: debit card, credit card, net-banking, Gpay, Paypal, etc. A payment receipt will be generated after payment.
2. **Ticket generation:** A soft copy of the ticket will be generated after payment.

- **Communication (high priority)**

1. **Customer Services:** A hotline service (e-mail, phone) will be provided for customers who face any technical/non-technical issues. Feedback forms and surveys will also be conducted for product improvement.
2. **AI Bots:** Interactive interface for troubleshooting, asking doubts and customer feedback.

- **Historical Data management (medium priority)**

1. **User Database:** Keeping record of all the customers, booking history and payment records.
2. **Audit Tracking:** Recording all actions performed by admin and customers will be recorded for security purposes.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

1. The web application should be fast and respond to users within 1 second.
2. The app should be able to handle 1000 customers simultaneously.
3. The web application should have Hot Module Replacement (HMR) feature

5.2 Safety Requirements

1. The system uses SSL (secured socket layer) in all transactions that include any confidential customer information.
2. The system must automatically log out all customers after a period of inactivity.
3. The system should not leave any cookies on the customer's computer containing the user's password.
4. The system's back-end servers shall only be accessible to authenticated administrators.
5. Sensitive data will be encrypted before being sent over insecure connections like the internet.

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5.4 Software Quality Attributes

- 1) **Reliability** - The system should update and show the booking seats real-time. The system should be a one-way data flow that can be understood by just one look.
- 2) **Maintainability** - A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the program will be done. Also, the software design is being done with modularity in mind so that maintainability can be done efficiently.
- 3) **Usability** - The web application should be a responsive web application. The web application must provide various languages to every use.
- 4) **Accessibility** - The system shall provide handicap access and the system shall provide multi-language support.
- 5) **Performance** - The product shall be based on web and has to be run from a web server and it shall take initial load time depending on internet connection strength which also depends on the media from which the product is run.

5.5 Business Rules

- 1) The customer should have a valid and active email address for logging in to the portal.
- 2) The customer should have an ATM card with sufficient balance to make a successful payment from the portal.

Appendix A: Glossary

1. CPU: Central Processing Unit
2. HMR: Hot Module Replacement
3. PC: Personal Computer
4. SRS: Software Requirement Specification
5. ATM: Automated Teller MACHine
6. DNS: Domain Name Space
7. HTTPS: Hypertext Transfer Protocol Secure
8. LAN: Local Area Network
9. PHP: Hypertext Preprocessor
10. RAM: Random Access Memory
11. SQL: Structured Query Language
12. SSL: Secured Socket Layer
13. TCP/IP: Transmission Control Protocol with Internet Protocol
14. UI: User Interface
15. WAN: Wide Area Network