# SRS Document

## Movie Reservation Project

# Contents

# Chapter 1

# Introduction

The Movie Ticket Reservation System is a sophisticated web-based application developed to redefine the traditional approach to booking movie tickets through the seamless integration of modern web technologies. This platform is designed to offer an intuitive, efficient, and user-friendly interface for customers to conveniently search for movies, select preferred seats, and make secure bookings from the comfort of their homes.

By leveraging real-time data processing and interactive user experience principles, the system seeks to eliminate the inefficiencies commonly associated with manual ticket booking. Through the automation of core processes such as seat management, show scheduling, and ticket issuance, the platform enhances operational effectiveness while ensuring a smooth and streamlined booking experience for end-users.

In addition to serving customers, the system equips theatre administrators with robust tools for managing theatres, movie schedules, seat layouts, and booking records. Through this unified platform, the Movie Ticket Reservation System contributes to enhancing both customer satisfaction and theatre management efficiency by embracing digital transformation within the cinema industry.

# Chapter 2

# Purpose

The purpose of the Movie Ticket Reservation System is to provide a comprehensive, user-friendly, and efficient online platform for booking movie tickets. This system aims to eliminate the limitations and inefficiencies of traditional, manual ticket booking methods by introducing a digital solution that is accessible from anywhere and at any time.

The system is designed to benefit both customers and theatre administrators. Customers are provided with the convenience of browsing available movies, selecting seats in real-time, and making secure online payments without the need to visit a theatre physically. Theatre administrators are equipped with powerful tools to manage movie listings, show schedules, seat availability, and booking records effectively.

By automating the ticket booking process, the Movie Ticket Reservation System reduces human errors, improves operational efficiency, and enhances the overall customer experience. This project intends to bridge the gap between cinema management and digital technologies, ultimately contributing to the modernization of the movie industry.

# Chapter 3

# Project Objectives

The primary objective of the Movie Ticket Reservation System is to offer a reliable and user-friendly platform that simplifies the process of booking movie tickets for both customers and theatre administrators. The system is designed to achieve the following specific objectives:

- To provide customers with an intuitive platform for browsing movies, selecting preferred show timings, and booking seats in real-time.
- To enable secure and seamless online payment integration for completing bookings.
- To automate the ticket reservation process, reducing manual intervention and minimizing human errors.
- To improve operational efficiency for theatre administrators by providing tools for managing theatres, movie schedules, seat layouts, and booking records.
- To deliver real-time updates on seat availability and show timings to both customers and administrators.
- To enhance the overall user experience through a responsive, reliable, and accessible web-based application.

# Chapter 4

# Scope

The Movie Ticket Reservation System is designed to serve as a comprehensive platform for both customers and theatre administrators, streamlining the entire movie ticket booking process through digital means. This system focuses on delivering a convenient, reliable, and efficient solution that eliminates the need for physical ticket counters and minimizes manual errors.
For customers, the system offers the ability to:

- Search for movies by theatre, location, and show timings.
- View detailed movie information including language, genre, and duration.
- Select available seats in real-time using an interactive seating layout.
- Book tickets and complete payments securely through online gateways.
- View booked tickets through the order history section.

For theatre administrators, the system provides tools to:

- Manage theatres, screen details, and seating configurations.
- Schedule and update movie show timings.
- Monitor real-time seat availability and booking statuses.
- Maintain user and booking records through a centralized system.

# Chapter 5

# Functional Requirements

The **Movie Ticket Reservation System** will fulfill the following functional requirements to ensure efficient and reliable operation:

- The system will allow users to register, create an account, log in and log out securely.
- The system will allow users to search for movies based on location, theatre, language, and show timings.
- The system will display detailed information about movies,including language, genre, duration, and available show timings.
- The system will allow users to select seats from an interactive seating layout showing real-time availability.
- The system will allow users to make online bookings and process payments securely.
- The system will generate booking confirmations and allow users to view and download their booked tickets from the order history section.
- The system will allow administrators to manage movie listings, show schedules, and theatre information.
- The system will allow administrators to manage seat availability and booking records.

- The system will maintain a record of all user activities, bookings, and payments for future reference and reporting.

# Chapter 6

# Non-Functional Requirements

The **Movie Ticket Reservation System** will adhere to the following non-functional requirements to ensure system quality and reliability:

- **Performance:** The system will provide quick response times. Search results, seat availability, and booking confirmations will be displayed within 3 seconds under normal load conditions.
- **Scalability:** The system will be designed to handle an increasing number of users, theatres, and bookings without compromising performance.
- **Security:** The system will implement secure authentication for user accounts and will encrypt sensitive information, including passwords and payment details.
- **Availability:** The system will maintain at least 99.9% uptime to ensure availability for users and administrators at all times.
- **Usability:** The system will provide a clean, intuitive, and user-friendly interface accessible via desktops, tablets, and mobile devices.
- **Maintainability:** The system will be designed with modular components to facilitate future updates, bug fixes, and feature enhancements.
- **Data Integrity:** The system will ensure that all booking records, payments, and user data are accurate, consistent, and protected from unauthorized access or modification.

# Chapter 7

# Entity Relationship Diagram

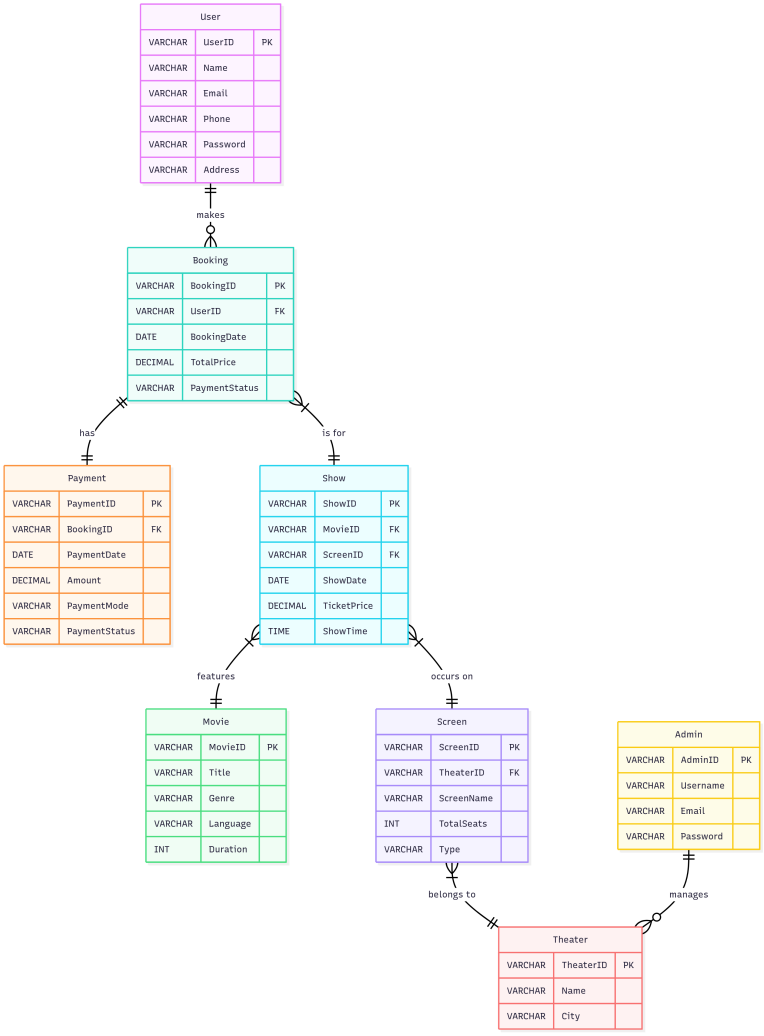


Figure 7.1: E-R Diagram

# Chapter 8

# Database Design

## 8.1 User Table

**Users / Customers Table**

| Column | Data Type | Constraints |
|---|---|---|
| UserID | INT | PRIMARY KEY (PK) |
| Name | VARCHAR | NOT NULL |
| Email | VARCHAR | UNIQUE, NOT NULL |
| Phone | VARCHAR | NOT NULL |
| Password | VARCHAR | NOT NULL (Hashed) |
| Address | VARCHAR | OPTIONAL |

## 8.2 Admin Table

**Admin Table**

| Column | Data Type | Constraints |
|---|---|---|
| AdminID | INT | PRIMARY KEY (PK) |
| Username | VARCHAR | UNIQUE, NOT NULL |
| Password | VARCHAR | NOT NULL (Hashed) |
| Email | VARCHAR | NOT NULL |

## 8.3 Movie Table

**Movie Table**

| Column | Data Type | Constraints |
|---|---|---|
| MovieID | INT | PRIMARY KEY (PK) |
| Title | VARCHAR | NOT NULL |
| Genre | VARCHAR | NOT NULL |
| Language | VARCHAR | NOT NULL |
| Duration | VARCHAR | NOT NULL |

## 8.4 Theatre Table

**Theater Table**

| Column | Data Type | Constraints |
|---|---|---|
| TheaterID | INT | PRIMARY KEY (PK) |
| Name | VARCHAR | NOT NULL |
| City | VARCHAR | NOT NULL |

## 8.5 Screen Table

**Screen Table**

| Column | Data Type | Constraints |
|---|---|---|
| ScreenID | INT | PRIMARY KEY (PK) |
| TheaterID | INT | FOREIGN KEY REFERENCES Theater(TheaterID) |
| ScreenName | VARCHAR | NOT NULL |
| TotalSeats | INT | NOT NULL |
| Type | VARCHAR | (2D, 3D, IMAX, etc.) |

## 8.6 Showtime Table

**Show / ShowTime Table**

| Column | Data Type | Constraints |
|---|---|---|
| ShowID | INT | PRIMARY KEY (PK) |
| MovieID | INT | FOREIGN KEY REFERENCES Movie(MovieID) |
| ScreenID | INT | FOREIGN KEY REFERENCES Screen(ScreenID) |
| ShowDate | DATE | NOT NULL |
| StartTime | TIME | NOT NULL |
| TicketPrice | DECIMAL | NOT NULL |

## 8.7 Seat Table

**Seat Table**

| Column | Data Type | Constraints |
|---|---|---|
| SeatID | INT | PRIMARY KEY (PK) |
| ScreenID | INT | FOREIGN KEY REFERENCES Screen(ScreenID) |
| SeatNumber | VARCHAR | (A1, A2, B1, etc.) |

## 8.8 Reservation Table

**Booking / Reservation Table**

| Column | Data Type | Constraints |
|---|---|---|
| BookingID | INT | PRIMARY KEY (PK) |
| UserID | INT | FOREIGN KEY REFERENCES Users(UserID) |
| ShowID | INT | FOREIGN KEY REFERENCES Show(ShowID) |
| BookingDate | DATE | NOT NULL |
| TotalPrice | DECIMAL | NOT NULL |
| PaymentStatus | ENUM | (Paid / Unpaid / Failed) |

## 8.9 Booked Seats Table

**Booked Seats Table**

| Column | Data Type | Constraints |
|---|---|---|
| BookedSeatID | INT | PRIMARY KEY (PK) |
| BookingID | INT | FOREIGN KEY REFERENCES Booking(BookingID) |
| SeatID | INT | FOREIGN KEY REFERENCES Seat(SeatID) |

## 8.10 Payment Table

**Payment Table**

| Column | Data Type | Constraints |
|---|---|---|
| PaymentID | INT | PRIMARY KEY (PK) |
| BookingID | INT | FOREIGN KEY REFERENCES Booking(BookingID) |
| PaymentDate | DATE | NOT NULL |
| Amount | DECIMAL | NOT NULL |
| PaymentMode | ENUM | (Credit, Debit, UPI, etc.) |
| PaymentStatus | ENUM | (Success / Failed / Pending) |

# Chapter 9

# Use Case Diagram

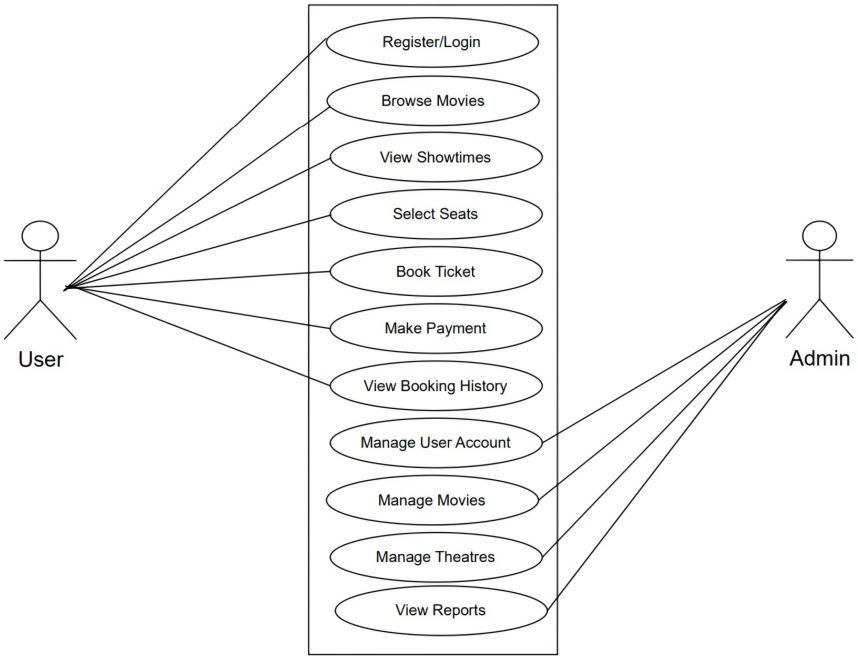


Figure 9.1: Use Case Diagram

# Chapter 10

# Sequence Diagram

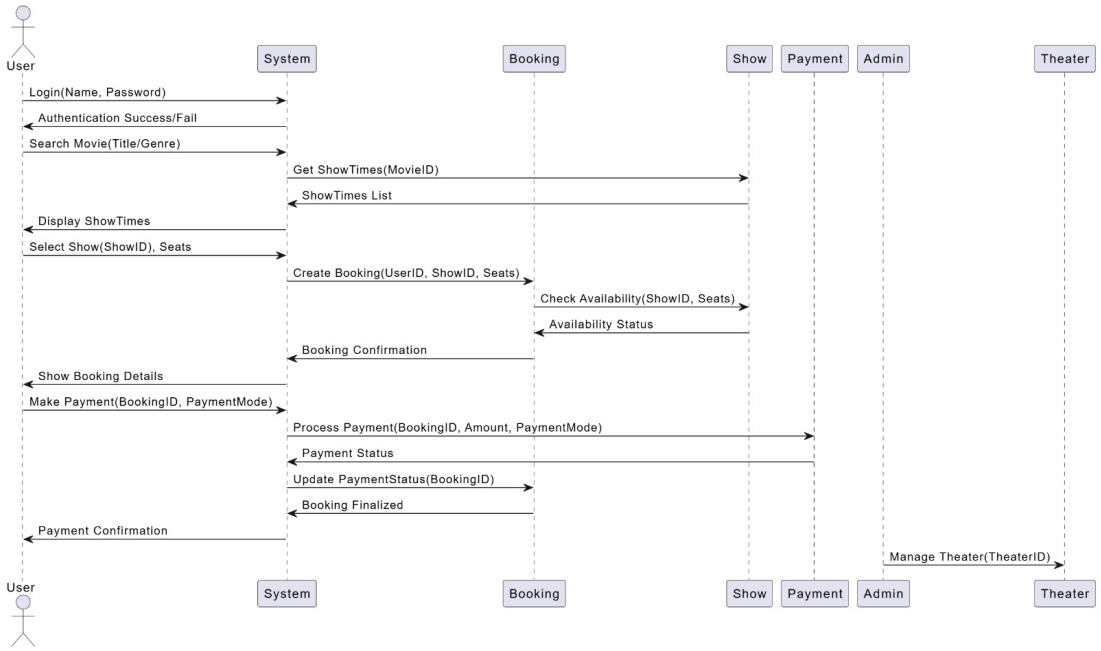


Figure 10.1: Sequence Diagram