CHAPTER II - Tasks and Activities Performed

2.1. Analysis of Tasks and Activities

Requirement collections were done through organisational visit. After the requirements were collected, the major task was to break down the proper procedure and build the working framework. Organisation visit helped to analyse various aspects of the organisation and find out the problems that can be solved by the software build.

2.2. Analysis of Possible Solutions

2.2.1. Requirement Analysis

Requirement's analysis for requirements engineering is a process used to determine the needs and expectations of a customer. The main purpose of this project is to provide a reliable and secure and efficient and user-friendly environment to the customers and management authorities. It also benefits the customer with efficient and faster service.

2.2.2. Functional Requirements

Functional requirements are product features or functions that developers must implement to enable users to accomplish their tasks. So, it's important to make them clear both for the development team and the stakeholders. Generally, functional requirements describe system behaviour under specific conditions. Functional Requirements are also called Functional Specification.

- Customers will be able to create their account on the movie ticket booking portal.
- Customers will be able to see a list of movies running at present time.
- Customers will be able to view the show timing and booking status.
- Customers will be able to see the booking status of any movie and also book shows of any date.
- Admin can add the movie as well as the showtime for the movie.
- Admin can view the list of customers who booked the tickets for the movie.

Functional Requirements can be briefly described by the help of Use-Case Diagram which is shown below:

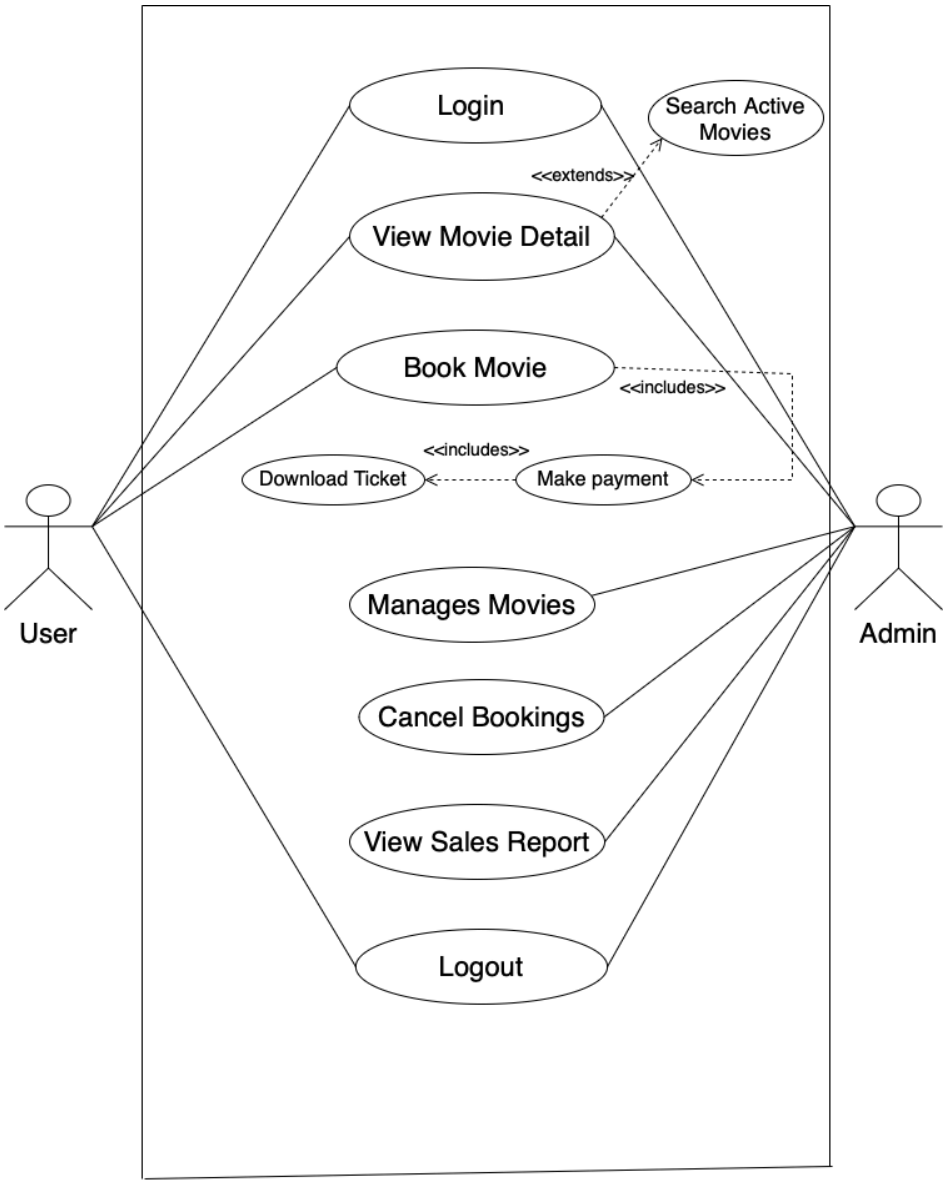


Figure 2.1: Use Case Diagram of Online Movie Ticket Booking System

Table 2.1 : Interact with the home page

Use-case 1:	UC1 : Interact with the Homepage
Primary Actor:	User and Admin
Secondary Actor:	None
Description:	The user and admin can interact with the homepage to access information about available movies, promotions, and navigate to different sections of the system.
Pre-Condition:	The user or admin can proceed to view movie listings, promotions, upcoming movies and other system features.
Post-Condition:	Users and admin can perform signup and login action into the system.
Success Scenario:	The user or admin navigates to the homepage. The user or admin can click on movie posters or promotion banners to get more details.
Failure Scenario:	The homepage fails to load due to technical issues.

Table 2.2 : Login to the system

Use-case 2:	UC2 : Login into the system
Primary Actor:	User and Admin
Secondary Actor:	None
Description:	The user and admin can login into the system through a login into the system.
Pre-Condition:	The user and customer have to know the required credentials to login into the system.
Post-Condition:	Users can perform the further required action in the system.
Success Scenario:	Login success and enter the book seats page.
Failure Scenario:	Password not matched.

Table 2.3 : View Movie Details

Use-case 3:	UC3 : View Movie Details
Primary Actor:	User and Admin
Secondary Actor:	None
Description:	The user and admin can view detailed information about a specific movie, including its title, genre, release date, duration, director, and description.
Pre-Condition:	The user or admin has successfully logged into the system and movies available in the system.
Post-Condition:	Users can select available seats. Admin gains access to comprehensive details about the selected movie.
Success Scenario:	The user or admin navigates to the movie details page. The user can book tickets for the movie.
Failure Scenario:	The selected movie details are not available due to technical issues.

Table 2.4 : User Books a Movie

Use-case 4:	UC4 : View Movie Details
Primary Actor:	User
Secondary Actor:	System
Description:	The user books movie tickets for a selected movie and showtime.
Pre-Condition:	Movies and showtimes are available in the system.
Post-Condition:	The user has booked tickets for the selected movie and showtime. The system updates seat availability and records the booking.
Success Scenario:	User confirms the movie and makes payment.
Failure Scenario:	Issue during the process the system provides an error message and prompts the user to retry.

Table 2.5 : Add Movies and View Customers

Use-case 5:	UC5 : Add movies and view customers
Primary Actor:	Admin
Secondary Actor:	System
Description:	Admin adds new movies to the system, providing details such as title, genre, release date, duration, director, and description.
Pre-Condition:	The admin has successfully logged into the system.
Post-Condition:	New movies are added to the system, and their details are available for users.
Success Scenario:	Admin adds the movie successfully.
Failure Scenario:	If the admin encounters issues during the addition process, the system provides an error message and prompts the admin to review and correct the information.

Table 2.6 : View and Updates Movies

Use-case 6:	UC6 : View and Updates Movies
Primary Actor:	Admin
Secondary Actor:	System
Description:	The admin updates details of an existing movie in the system, including information such as title, genre, release date, duration, director and description
Pre-Condition:	Movies are available in the system.
Post-Condition:	New movies are added to the system, and their details are available for users.
Success Scenario:	Admin updates the movie successfully.
Failure Scenario:	If the admin encounters issues during the addition process, the system provides an error message and prompts the admin to review and correct the information.

Table 2.7 : View and Delete Movies

Use-case 7:	UC7 : View and Delete Movies
Primary Actor:	Admin
Secondary Actor:	System
Description:	The admin removes a movie from the system, permanently deleting its details and associated information.
Pre-Condition:	Movies are available in the system.
Post-Condition:	The selected movie is permanently removed from the system.
Success Scenario:	Admin deletes the movie successfully.
Failure Scenario:	If the admin decides not to proceed with the deletion, they can cancel the operation, and the system returns to the movie management options

Table 2.8 : Logout from the System

Use-case 8:	UC8 : Logout from the System
Primary Actor:	Users and Admin
Secondary Actor:	System
Description:	The user or admin logs out of the system, terminating the current session.
Pre-Condition:	The user or admin has successfully logged into the system.
Post-Condition:	The user or admin is logged out, and the system terminates the session.
Success Scenario:	Users and admin logout form the system and system returns to the home page.
Failure Scenario:	If the user or admin decides not to log out, they can cancel the operation, and the system remains in the current state.

2.2.3. Non-Functional Requirements

Simply said, a non-functional requirement is a specification that describes the system's operation capabilities and constraints that enhance its functionality. These may be speed, security, reliability, etc. Non-functional Requirements (NFRs) define system attributes such as security, reliability, performance, maintainability, scalability, and usability. They serve as constraints or restrictions on the design of the system across the different backlogs.

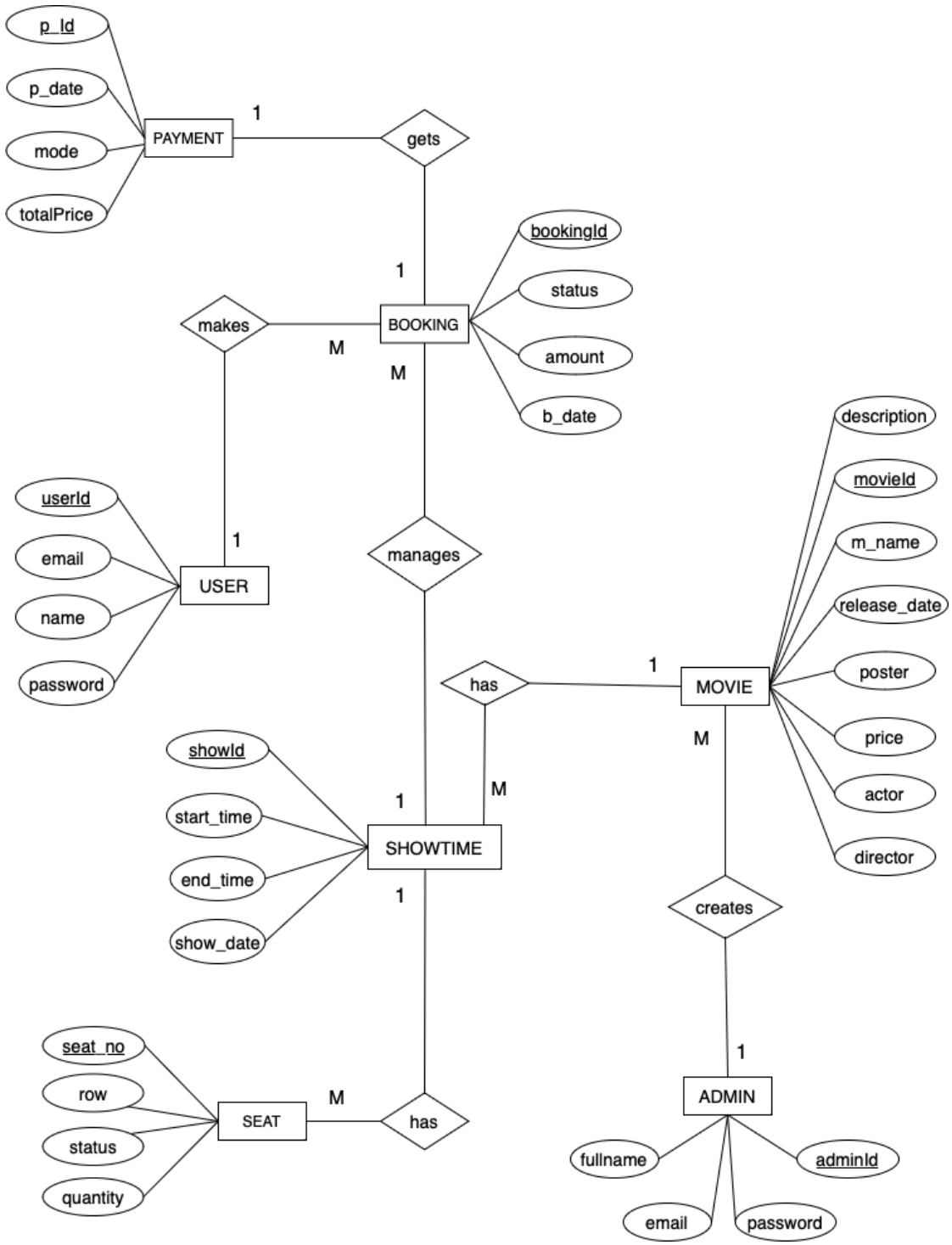
The non-functional requirements for "Online Movie Ticket Booking System" are:

- The online movie ticket booking system will be available to the customers up to 24/7.
- The Online Movie Ticket Booking System must be secured with proper username and passwords.
- All the data in the System must be accurate and reliable.
- All the data should be secured so that the information will not be leaked.

2.2.4. Software Requirements

Software	**Purpose**
Draw.io:	In order to draw the ER-diagram,Use-case, Sequence diagram, Class-diagram and so on.
Visual Studio Code:	In order to design layouts and to write code.
Microsoft-word:	To write documentation of the project.

2.2.5. Entity Relationship Diagram



2.2.6. Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

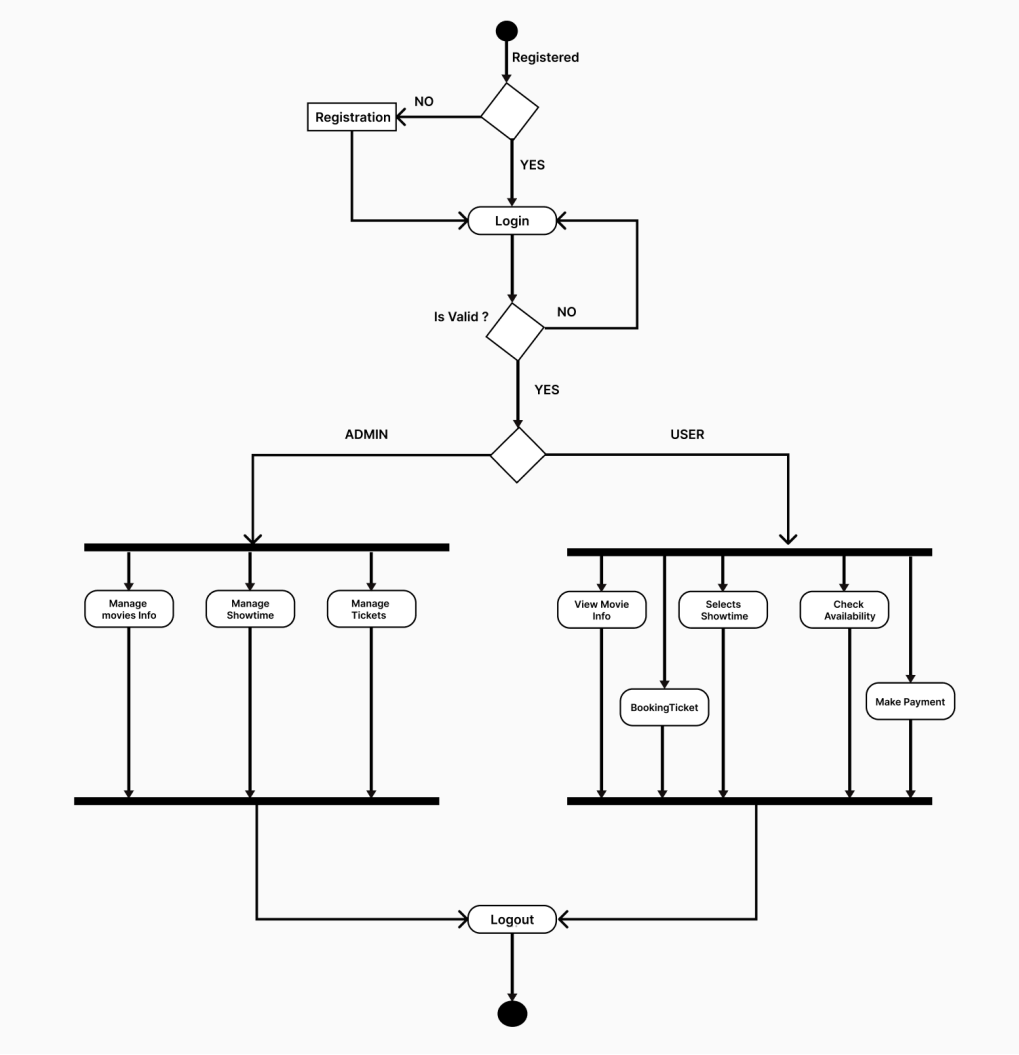


Figure 2.4: Activity Diagram of Online Movie Ticket Booking System

2.2.7. Testing

Testing is a method to check whether the actual software product matches expected requirements and to ensure that the software product is Defect free. It involves execution of software/system components using manual or automated tools to evaluate one or more properties of interest. The purpose of software testing is to identify errors, gaps or missing requirements in contrast to actual requirements.

Table 2.7: Testing Table

UC01: Login

Unit Effected	Test Input Data	Actual Result	Expected Outcome	Status
Login	Email: allan@gmail.com Password: allan123	Admin is logged in into the system.	Admin is logged in.	Pass

UC02: Add Movies

Unit Effected	Test Input Data	Actual Result	Expected Outcome	Status
Navigate to add movies.	Name: Salar Description: Action Image: salar.jpeg	Add movies form should be displayed.	Movie is added successfully.	Pass

UC02: Customer Sign-up

Unit Effected	Test Input Data	Actual Result	Expected Outcome	Status
Add Customers	Name: Nayak Yadav Email: nayak@gmail.com Password: nayak123	New customers should be registered.	Registered customer signed in.	Pass

2.3. Findings

After analysing the problems of the organisation, it was found that using the old techniques may increase the overall cost of the organisation as well as may be difficult to handle. If organisations use this software for recording and managing, it will help them to maintain record effectively and efficiently with reduction in cost.