# OCBC Hack-IT, Final Assessment
# Developer Track


**Project Topic**:

Movie Ticket Booking Web Application


**Design Specification**

Version 1.1.3

12/09/2021


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# Table of Contents

# Document Control

| Title | Movie Ticket Booking Web Application |
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| **Documentation Name** | Design Specification |

| Owner | Current Version | Last Change On |
|---|---|---|
| Ng Ming Yao | V1.1.3 | 12 September 2021, 12.54pm |

## Distribution List

| Name | Roles |
|---|---|
| Ng Ming Yao | Frontend Developer, Backend Developer, Documentation Writer |

## Record of Revision

| Revision Date | Description | Section Affected | Changes Made By | Version After Revision |
|---|---|---|---|---|
| 31/08/2021 | 1st Draft of the Document | Entire Document | Ng Ming Yao | V1.0.0 |
| 01/09/2021 | Add in Use Case Description, Sequence Diagram & Wireframe | User Story No.1 | Ng Ming Yao | V1.0.1 |
| 04/09/2021 | Add in Use Case Description, Sequence Diagram & Wireframe | User Story No.2 | Ng Ming Yao | V1.0.2 |
| 06/09/2021 | Add in Future Implementations | Future Implementations | Ng Ming Yao | V1.0.3 |
| 07/09/2021 | Add in Use Case Description, Sequence Diagram & Wireframe | User Story No.3 | Ng Ming Yao | V1.1.0 |
| 09/09/2021 | Add in Use Case Description, Sequence Diagram & Wireframe | User Story No.4 | Ng Ming Yao | V1.1.1 |
| 10/09/2021 | Add in diagrams | Architecture Diagram and Hierarchy Diagram | Ng Ming Yao | V1.1.2 |
| 12/09/2021 | Document Review | Entire Document | Ng Ming Yao | V1.1.3 |

# Overview

We aim to develop and host a single webpage application that allows users to book movie tickets on our platform. All users will be able to view all seats in the theatre and able to book the available seats.
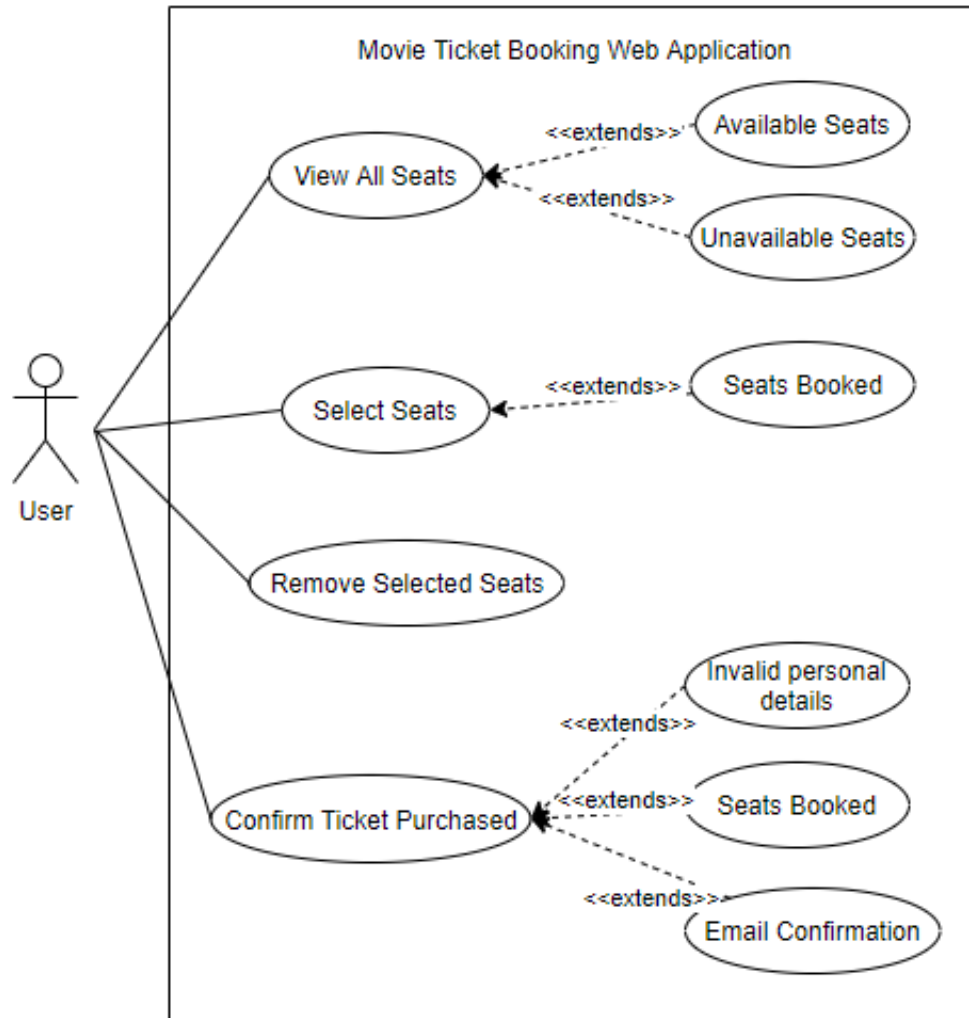
# Functional Requirement Specification
## Overview
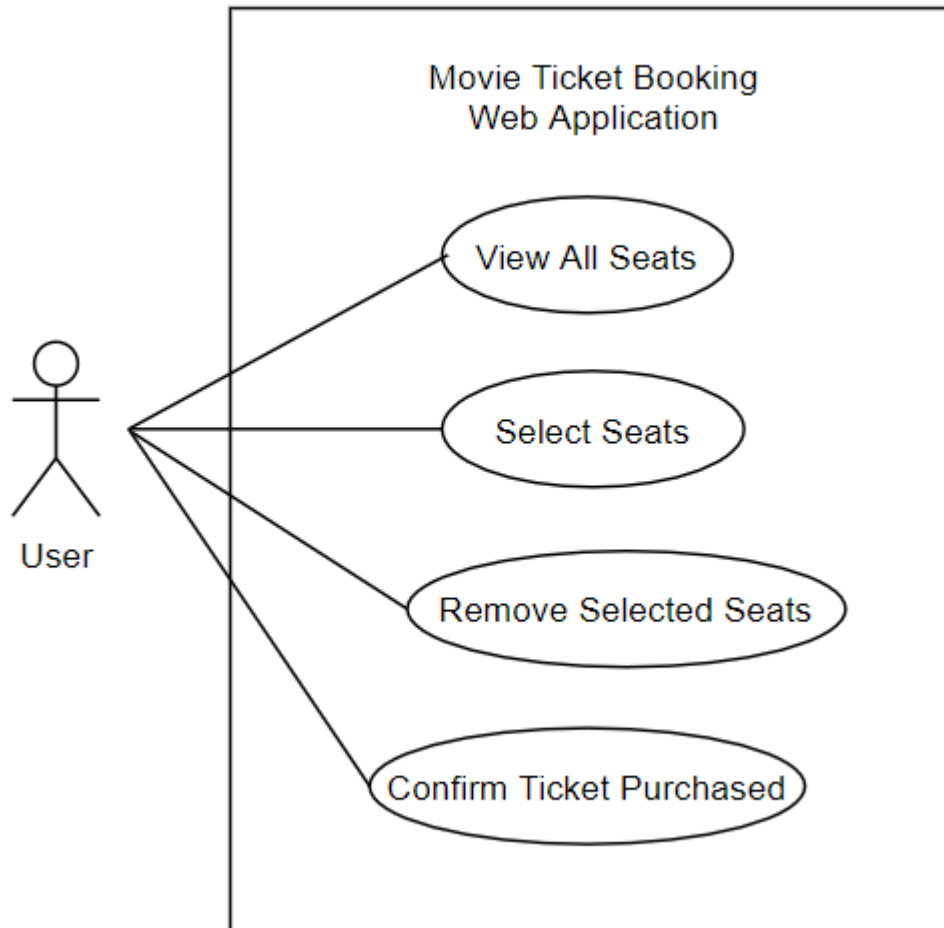
## Use Case Diagrams

Actor: User
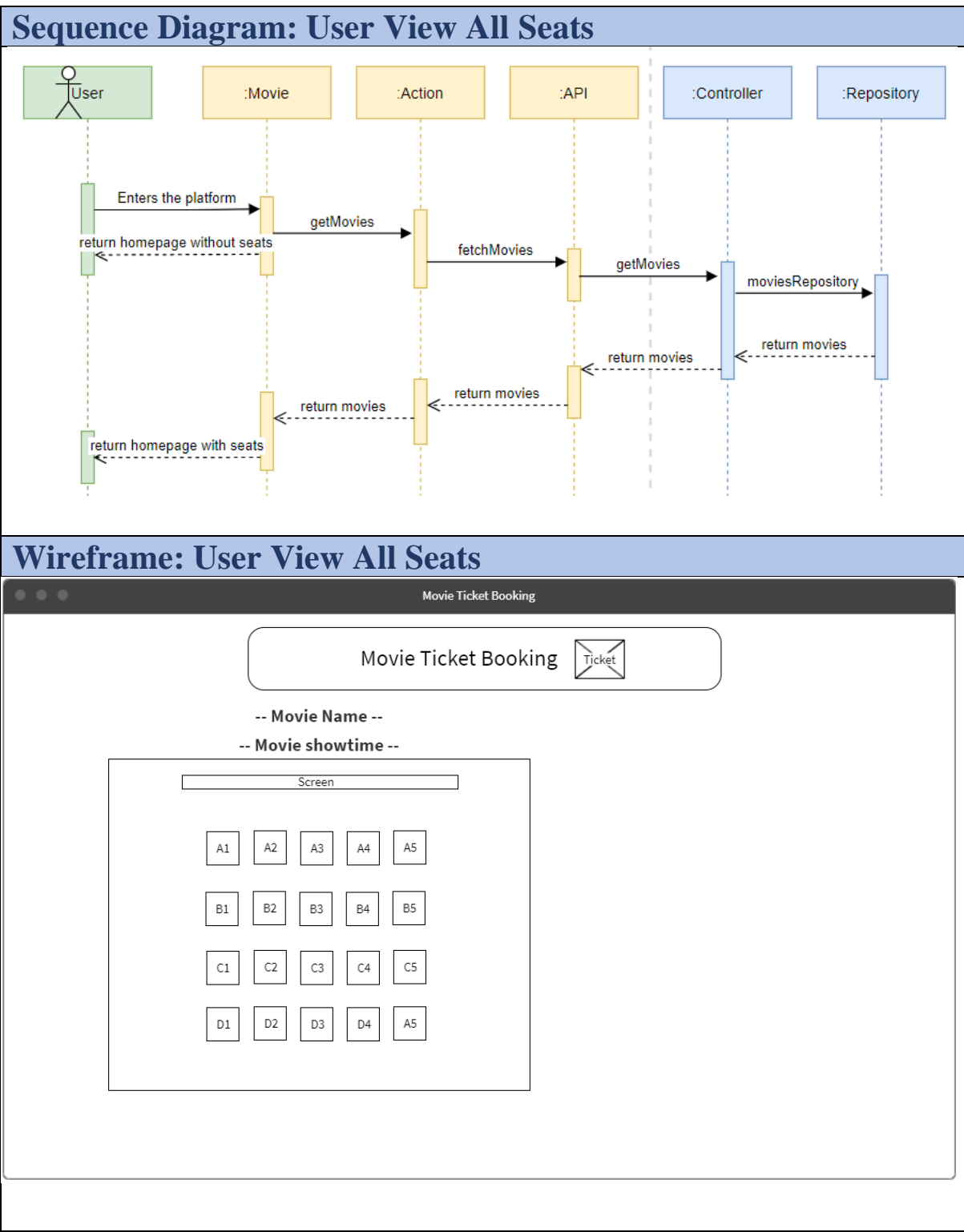
## User Stories

Actor: User

| S/No. | Description |
|:---:|:---|
| 1 | As a user, I want to be able to view all available and unavailable seats in the theatre so that I can know which of the seats are available for purchase. |
| 2 | As a user, I want to be able to select the available seats so that I can purchase a ticket for the seats that I am interested in. |
| 3 | As a user, I want to be able to remove selected seat so that I can remove it from the shopping cart. |
| 4 | As a user, I want to be able to confirm my purchase so that I can get the ticket for the movie. |

User Stories

## Use Case Description, Sequence Diagrams & Wireframes

Actor: User

1. As a user, I want to be able to view all available and unavailable seats in the theatre so that I can know which of the seats are available for purchase.
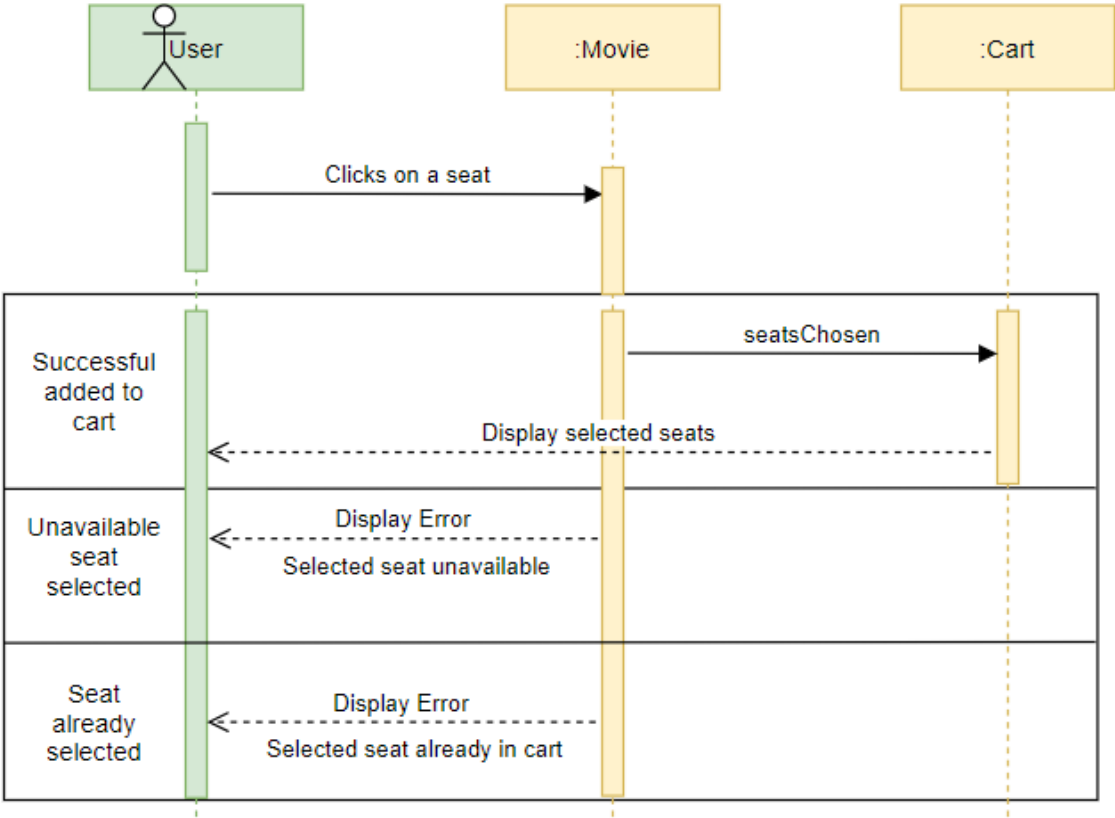
| Use Case Description: User View All Seats | |
|---|---|
| **Stakeholders and Goals** | User – wants to view all seats |
| **Description** | Users want to be able to view all available and unavailable seats in the theatre. |
| **Actors** | User |
| **Pre-Condition** | None |
| **Post-Condition** | The map of all seats in the theatre is displayed to the user. |
| **Trigger** | The user wants to view the map of all seats. |
| **Normal Flow:**<br>1. The User enters the platform through the web application link.<br>2. The system redirects the user to the website.<br>3. The system shows the theatre map with all its seats with different colours for available seats and unavailable seats.<br>4. End. | |
| **Sub-Flows** | None |
| **Alternative/Exceptional Flows:** None | |

## Sequence Diagram: User View All Seats



## Wireframe: User View All Seats

2. As a user, I want to be able to select the available seats so that I can purchase a ticket for the seats that I am interested in.

| Use Case Description: User Select Seats | |
|---|---|
| **Stakeholders and Goals** | User – wants to select seat. |
| **Description** | A User wants to select available seats and add it to the shopping cart for purchase. |
| **Actors** | User |
| **Pre-Condition** | None |
| **Post-Condition** | Selected seat is added to the shopping cart. |
| **Trigger** | User wants to buy movie ticket. |
| **Normal Flow:** <br> 1. The User clicks on any available seat shown on the theatre map. <br> 2. The System add the seat into the shopping cart and display it at the shopping cart section. <br> 3. End. | |
| **Sub-Flows** | None |
| **Alternative/Exceptional Flows:** <br> 2a. The User clicks on the unavailable seat: A pop-up screen shows that the seat selected is unavailable. <br> 2b. The User clicks on a selected seat: A pop-up screen shows that the seat selected is already added to the cart. | |

## Sequence Diagram: User Select Seats



## Wireframe: User Select Seats
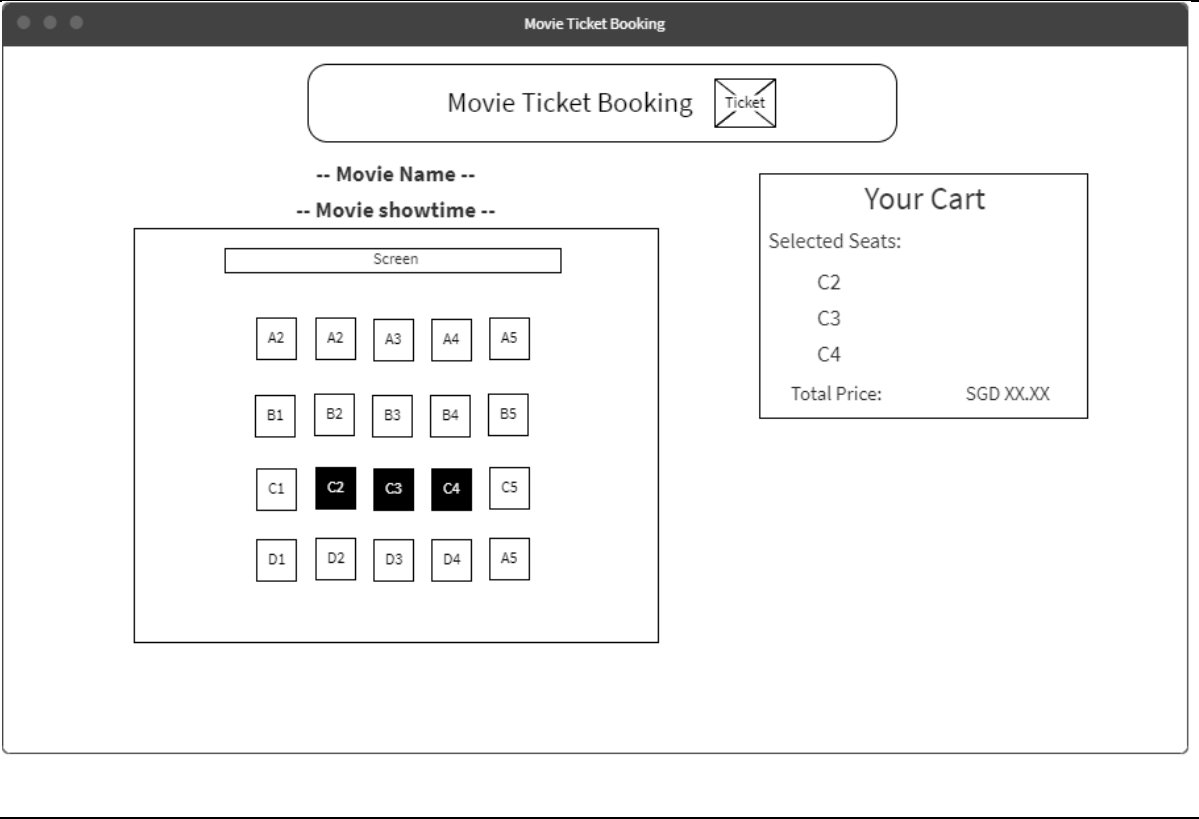
3. As a user, I want to be able to delete selected seat so that I can remove it from the shopping cart.

| Use Case Description: User Remove Selected Seats | |
|---|---|
| **Stakeholders and Goals** | User – wants to remove selected seat. |
| **Description** | A User wants to select available seats and add it to the shopping cart for purchase. |
| **Actors** | User |
| **Pre-Condition** | One or more seats are selected. |
| **Post-Condition** | Selected seat is removed from shopping cart. |
| **Trigger** | User wants to remove movie ticket from cart. |
| **Normal Flow:**<br>  1. The User clicks on the remove button beside the desire seat ID at the shopping cart.<br>  2. The System remove the seat from the shopping cart and display the latest shopping cart.<br>  3. End. | |
| **Sub-Flows** | None |
| **Alternative/Exceptional Flows:** None | |

## Sequence Diagram: User Remove Selected Seats
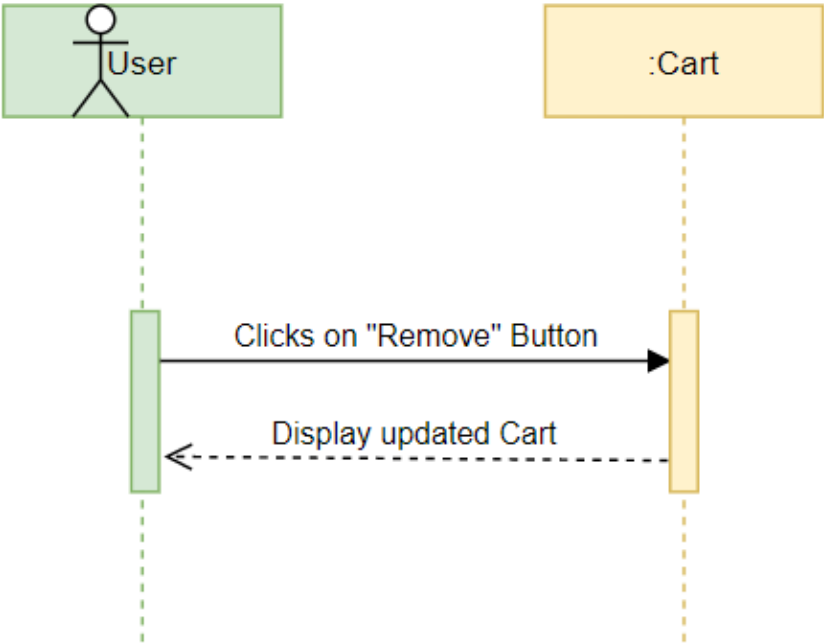


## Wireframe: User Remove Selected Seats
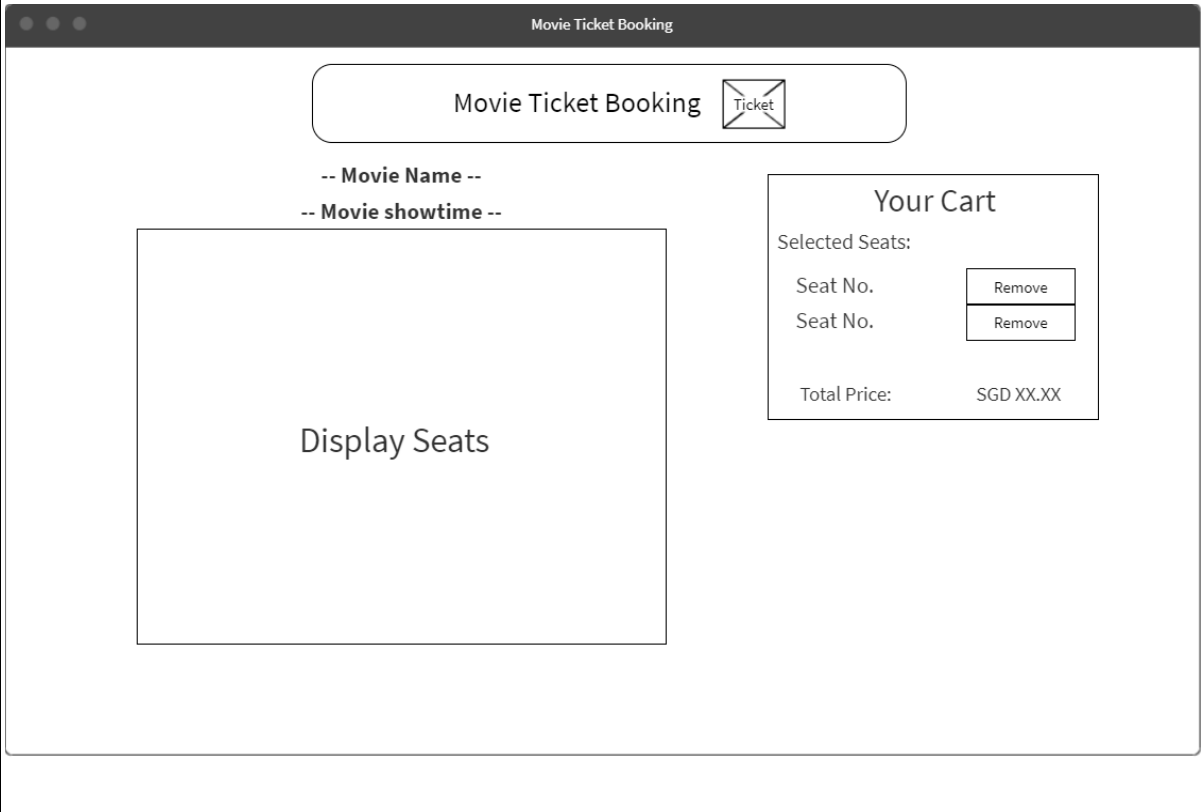
4. As a user, I want to be able to confirm my purchase so that I can get the ticket for the movie.

| Use Case Description: User Confirm Ticket Purchased | |
|---|---|
| **Stakeholders and Goals** | User – wants to confirm purchase from cart. |
| **Description** | A User wants to confirm his/her purchase of movie tickets. |
| **Actors** | User |
| **Pre-Condition** | One or more seats are selected. |
| **Post-Condition** | Tickets are purchased. |
| **Trigger** | User wants to confirm the purchase of movie ticket. |
| **Normal Flow:**<br>　1. The User fill in the personal details form at the cart and click on the "Purchase" button.<br>　2. The System confirm the purchase and change the seats status to unavailable at database and send out a confirmation email to user.<br>　3. End. | |
| **Sub-Flows** | None |
| **Alternative/Exceptional Flows:**<br>2a. "Name" text field at the form is empty: A pop-up screen remind the user to fill in their name.<br>2b. "Email" text field at the form is empty or invalid: A pop-up screen remind the user to fill in a valid email.<br>2c. The seats are taken by other user right before the purchase: A pop-up screen tells the user that the seats are taken and suggest them to choose new seats. | |

## Sequence Diagram: User Confirm Ticket Purchased
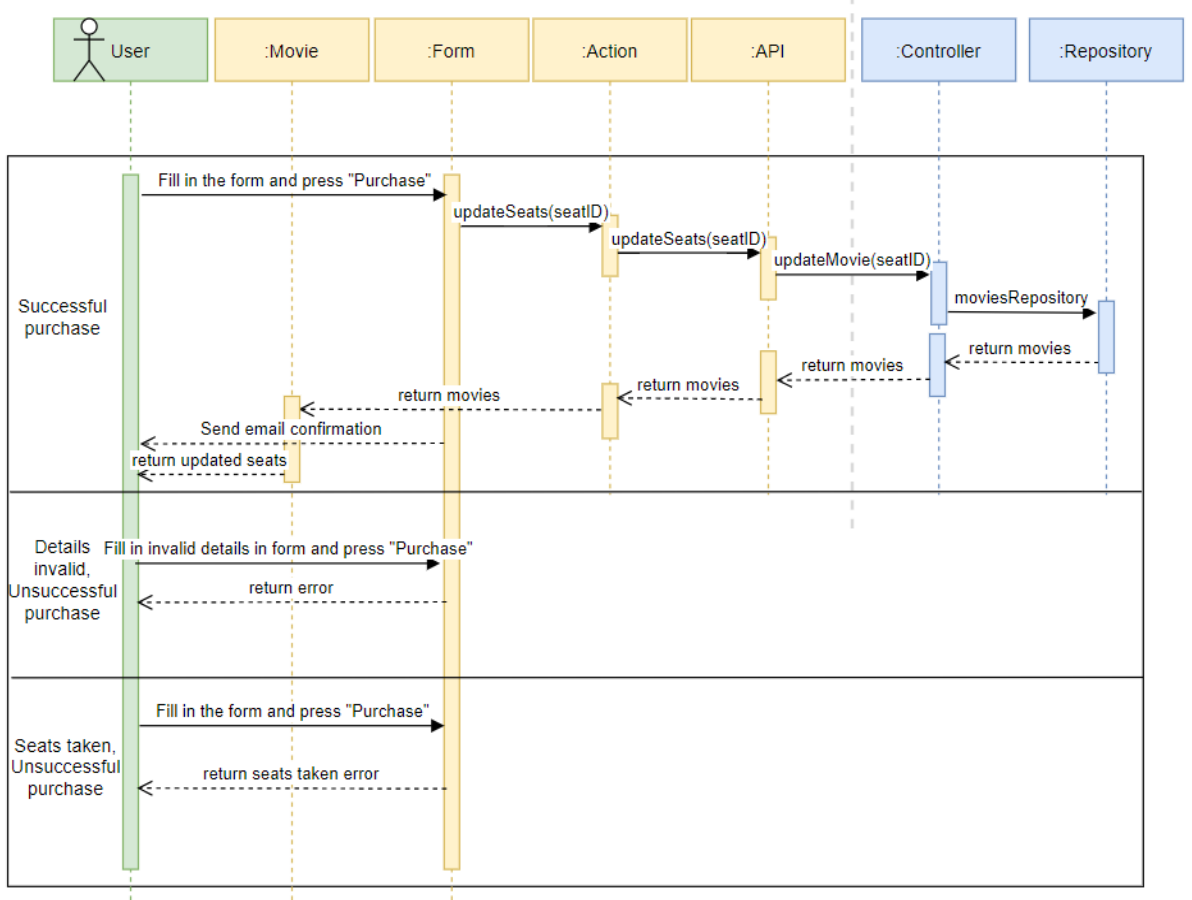


## Wireframe: User Confirm Ticket Purchased
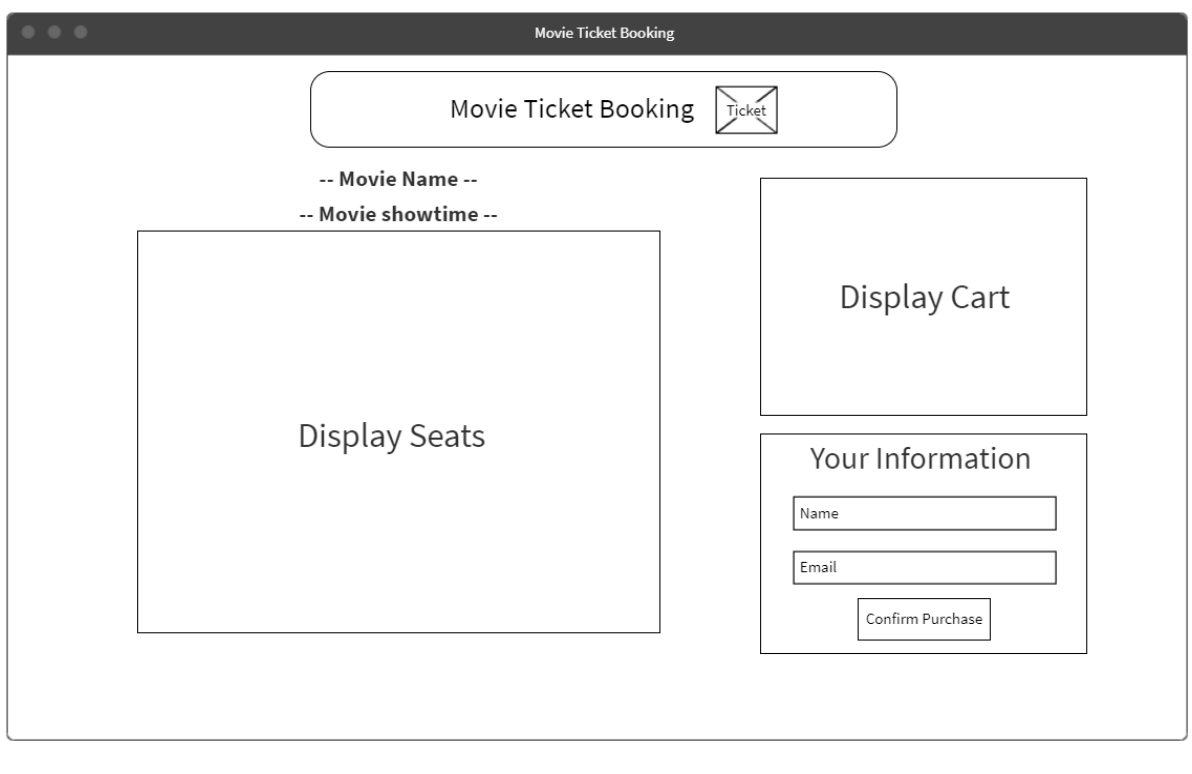
# Future Implementations

Actor: User

| S/No. | Description |
|-------|-------------|
| 1 | As a user, I want to be able to register for an account so that I can have the platform privileges such as purchase history. |
| 2 | As a user, I want to be able to login to the platform so that I can assess to my account on the platform. |
| 3 | As a user, I want to be able to logout from the platform so that I can end my session on the platform. |
| 4 | As a user, I want to update my personal details so that I can keep my information up to date. |
| 5 | As a user, I want to be able to choose the specific movie that I want so that I can view the available seats to purchase. |
| 6 | As a user, I want to be able to see the full description about a movie so that I can understand what the movie is about. |
| 7 | As a user, I want to be able to make payment on the platform so that I can confirm my purchase of the ticket. |
| 8 | As a user, I want to be able to filter through the movies so that I can view movie that are relevant to my search. |

# Design Specification

## Architecture Diagram
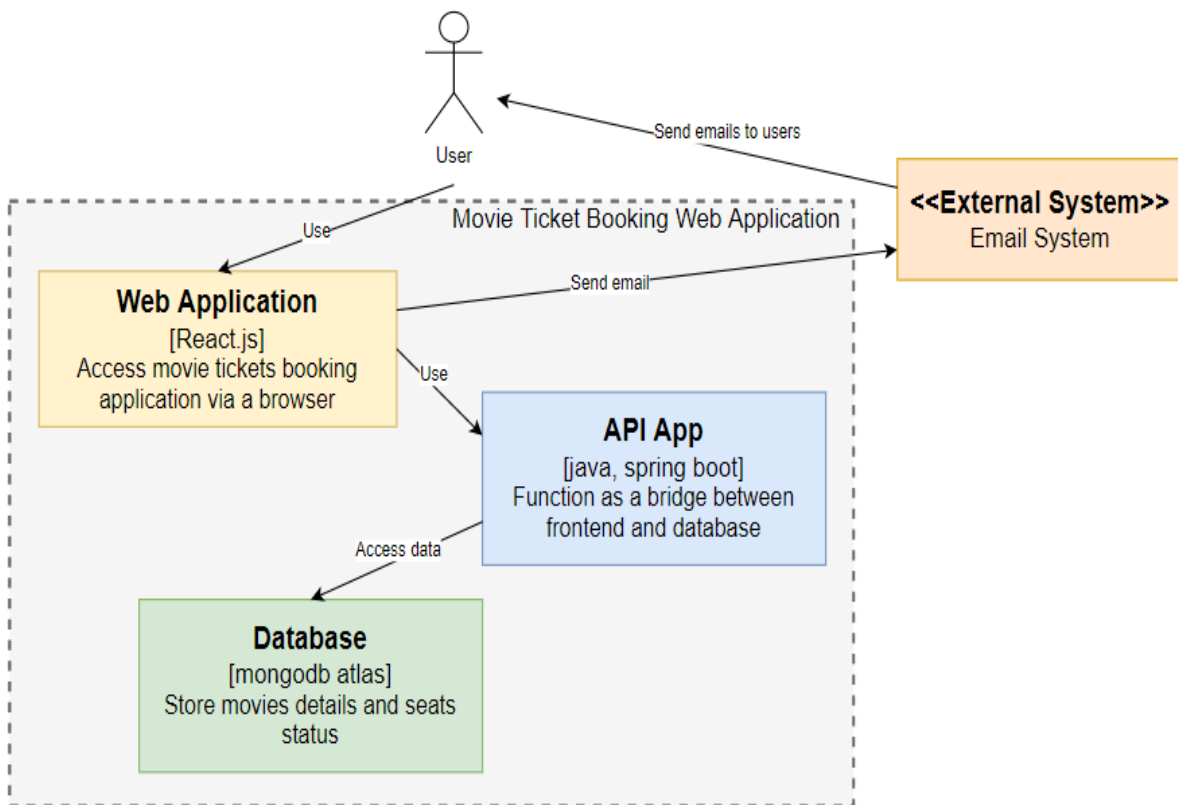
## Hierarchical Diagram
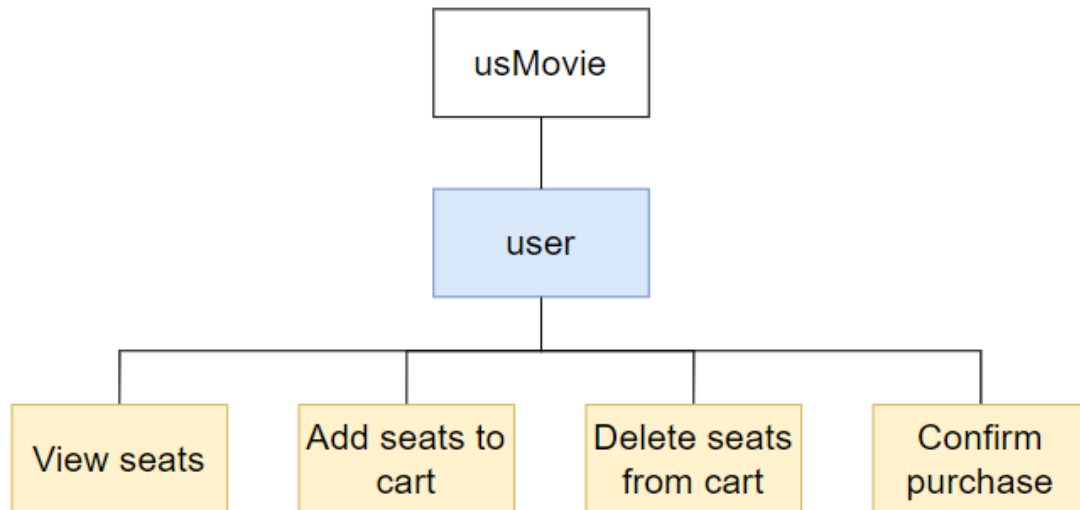
## Database Design Diagram

```
{
    _id : string
    movieName: string
    allSeats: {
                _id: string
                seatOccupied: string
        }
    seatPrice: int
    movieDateTime: string
}
```