Mobile App Design Document (UFCF7H-15-3)

Movie Ticket Booking App

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Requirements

Context / High Concept:

This project involves the development of a mobile application to book movie tickets, which helps cinema-goers to be able to reach a platform from where they easily browse, select a movie and confirm by ticket reservation or advance booking. On this app, they may scroll for every piece of information for movies, viewing times, or booking their movie tickets on tap-through smartphones. Information available covers necessary details of movies, such as seating, availability, ticket pricing, and even the best suitable showtimes.

It means a lot in the concept of this application in the fast-moving, mobile-oriented world of today. The creation of this app meets the increasing dependence on smartphones for daily needs by offering an integrated solution for movie ticketing. By streamlining everything from film discovery to seat selection, this app resolves everything comes from traditional ticket buying, such as lining up or failing to make a showing due to poor planning. It brings convenience and effectiveness right into users' hands, enabling movie ticket booking hassle-free and in only a few steps, thereby changing people's habits regarding cinema planning.

Target Users:

Target users for this application are those above the age of 13 years, including teenagers, young adults, and adults who prefer the convenience of booking tickets through a mobile application. It targets casual movie viewers and regular cinema visitors alike for easy navigation through browsing and selection of the current movies in the theatres nearby and their payment. According to the General Data Protection Regulation (GDPR) on privacy, users below the age of 13 require a parent or guardian to fill out the booking.

Initial Research:

The movie ticket booking application was developed by reaping power from existing applications like CGV, a Vietnamese movie theatre ticket-booking application. It offers main features such as the ability to browse the movie listing easily and quickly, showing details such as showtimes and trailers. Users are able to select seats interactively as with CGV in order to visualize the availability of their choice. Lastly, a neat and clean interface, much like CGV's, keeps the focus on what is truly important: booking tickets, making the experience enjoyable for users.

Functional / Non-functional Requirements:

Functional requirements include fetching movie data for movie details, showtimes, and prices; browsing movies; selecting showtime; booking tickets; selecting seats, making a payment, and generating a booking confirmation on the app. The user's profile, booking history, and favourite movies should be saved in local storage, using SQLite.

The app should be scalable and able to host large volumes of users, for non-functional requirements. It is important that the data should be encrypted, the user data is well protected, and the privacy regulations are observed. It should have high availability, reliability

with load balancing, fault tolerance, and achieve near totally uptimes. Lastly, it must be usable-usability, intuitive, responsive design will make it easy to navigate this application.

UI Requirements:

Many users want the app to be easy to use and simple. The homepage should have a good design with movie posters, showtimes. When the users pick a movie, the app should take them to a page with important info like trailers, actors, and ratings. Booking tickets should be straightforward, with a date and time picker and a clear seat selection map. It will include an easy payment gateway for the end to make the payment and confirm the booking. It should be responsive in design with smooth animation, ensuring accessibility for a wide range of users.

Wireframes

First sketches:

Here is the first mock-up of our mobile application. The home screen gives access to key features: detailed movie pages, including showtimes, cast, and trailers. The seat selection screen lets the user quickly select a spot for hassle-free booking. Further refinement is in our to-do list to make the design more user-friendly.

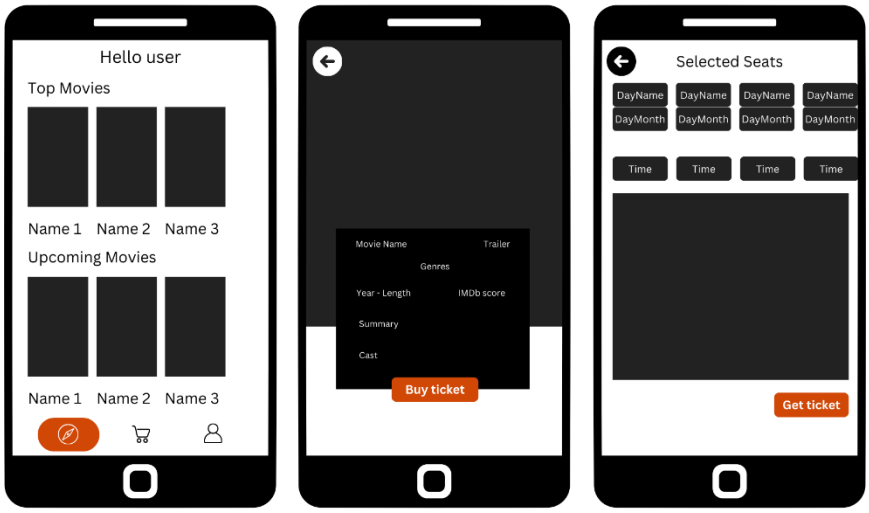

Figure 1. Sketches of the app design (designed using Canva)

Application Wireframes:

After gathering feedback and ideas from people at the university, we created the wireframe for our project using Figma, which can be viewed here: https://www.figma.com/design/nSo9JgGPOafUPHkQEdiplW/Wireframes?t=w3kGWxgFcQwgJu75-0

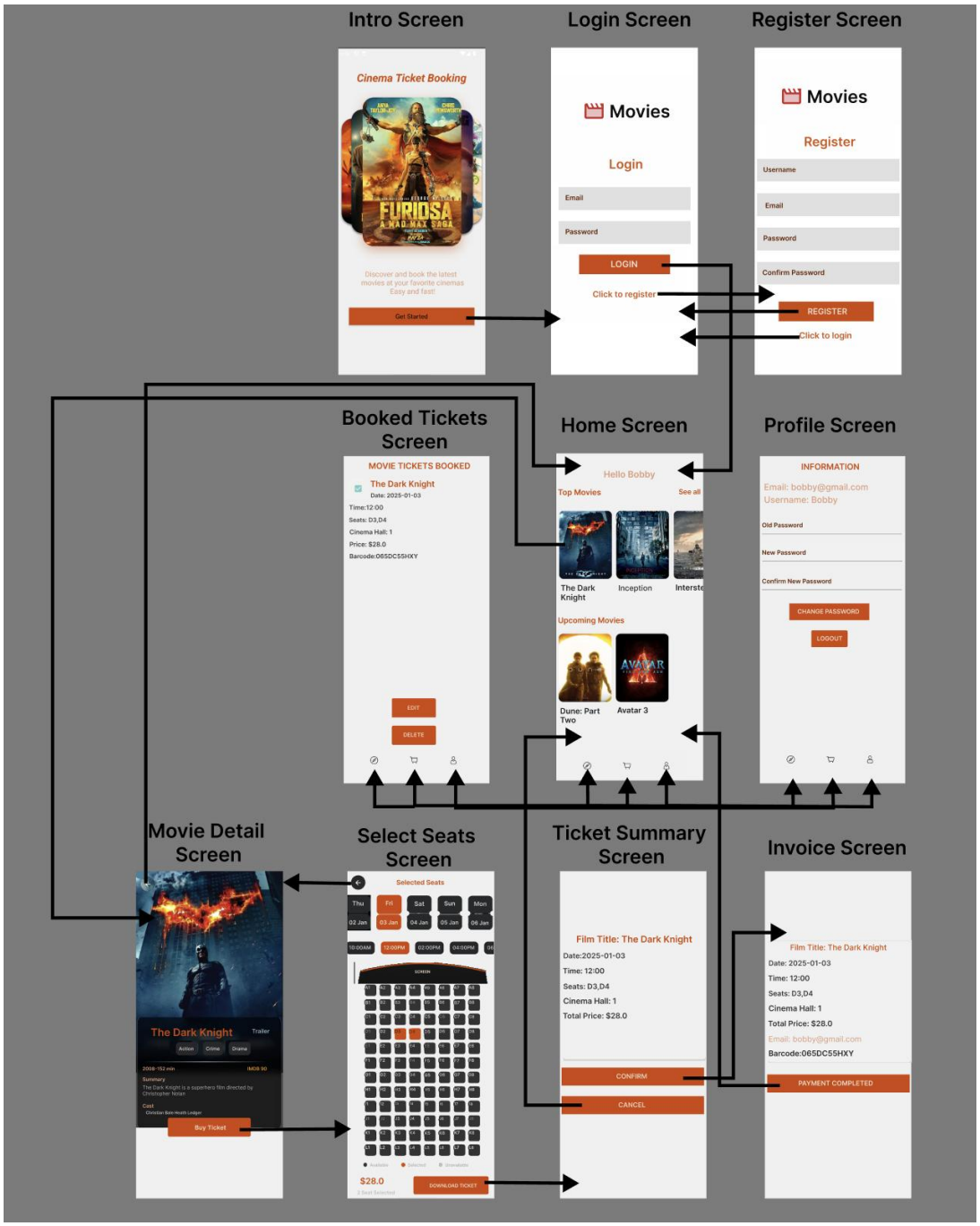

Figure 2. Wireframe for Light Theme

Figure 3. Wireframe for Dark Theme

User Flow / Navigation:

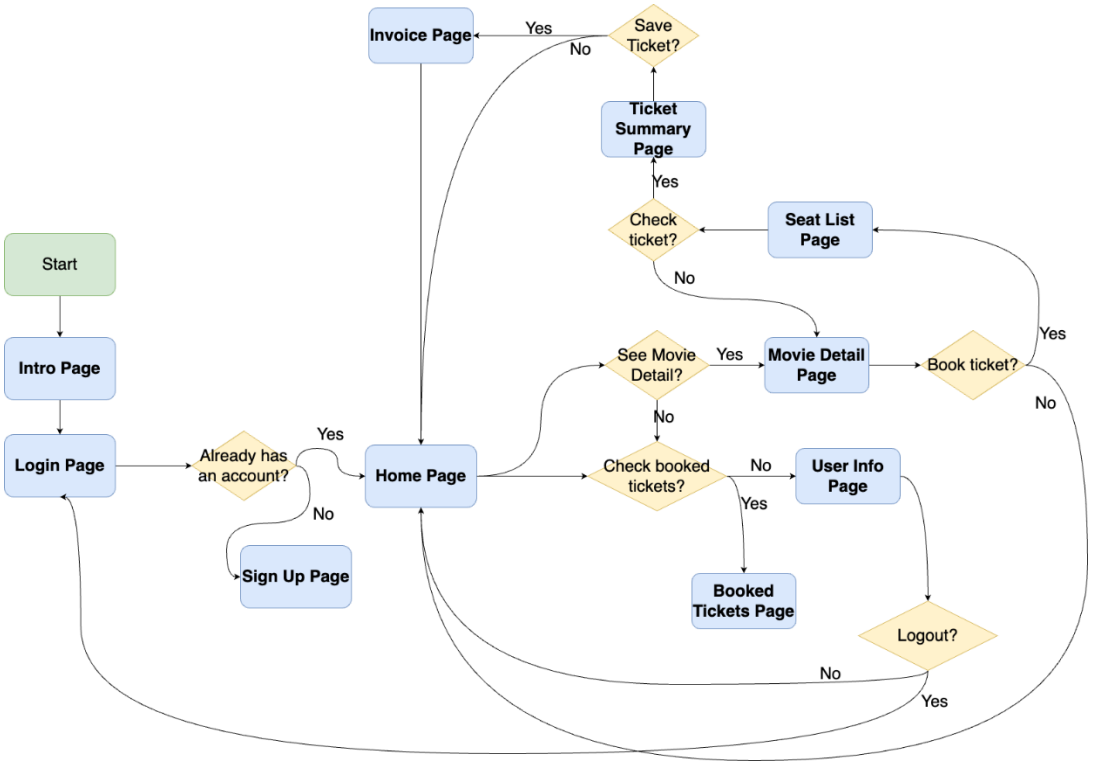

Figure 4. User Flow Diagram

The movie ticket booking mobile application is intended to make every user experience smooth and user-friendly right from the very start. Navigation is intuitive and easy: back buttons are consistent, calls to action are clear, and transitions between screens are intuitive. Besides, it offers a bottom navigation bar that allows users to quickly switch between main features of the application, like home screen, booked tickets view, and user profile.

First, a user has to log into the system by signing up or logging in. The onboarding starts with the Home Screen, where the user can search for movies: featured, releases, action, comedy, etc. Further, upon clicking a certain movie, the Movie Details page opens, containing information about the plot, ratings, and trailer. After selecting a movie, users can proceed to view available showtimes and choose their preferred showtime by picking a theatre and time slot, which also displays available seats.

It will then route the users to Seat Selection, where, from the presented ones-grey-coloured ones are not available-they are able to choose seats and adjust the number of tickets. The total price is also shown before proceeding to Payment, where the user has to input payment information and review the booking. They can confirm the payment afterwards or go back to modify their details.

Once the payment is made successfully, it will show the user a Booking Confirmation screen, which can then give them their ticket details for sharing or accessing it from their profile later on. In the second part of the navigation bar, the user can view the Booking History. The last part of the navigation bar is the User Profile, where he can manage his account.

App lifecycle:

The lifecycle of a movie ticket booking application is designed to ensure a good experience for users. It launches the app, loading the necessary data, like movies and showtimes, authenticates the user, and displays the home screen. In the active state, the app updates the content, fetches runtime data about shows and seat availability, etc. User sessions and data like selections and payment details are cached for efficiency.

If the application goes to the background, it saves up the user data and pauses the operations that are not important. Upon coming back to the foreground, it refreshes the UI and validates the session. In case of termination or crashing, it saves the unsaved data for recovery and creates logs for troubleshooting purposes. The application supports offline browsing, and in case of connection restoration, it syncs data in order to ensure valid bookings.

Scale / Orientation:

The movie ticket booking application should be responsive to screen size, resolution, and orientation on both smartphones and tablets. The UI should be responsive, meaning text, buttons, and images should be resized and rearranged according to the specifications of the device. It will optimize in portrait mode for narrow screens with an easily navigable vertical layout.

The application should be able to adapt to the wider screen in landscape mode, such that display will be effective, for example, horizontal scrolling of movie selection. The design also has a grid, so it will ensure that the arrangement of elements makes the app user-friendly from small to wide devices.

The font size will scale to be readable, and touch interactions will be designed to be easy to navigate. Testing on a multitude of devices, orientations, and platforms will be required to make sure the user's experience is consistently good. This consideration should, therefore, be clearly communicated to the development team to ensure the app performs well across all potential devices and orientations.

Composites

Mock-ups:

Mock-ups for a movie ticket booking mobile app give full insight into what the final design will look like. The home screen lists movies to choose from, while giving quick access to key sections and a search bar. The movie details screen will provide detailed information about the movie, such as the cast, running time, and summary.

The seat selection screen is interactive, showing seat availability in colour and the cost summary. The confirmation screen for the ticket shows the booking details and a code for entry into the cinema. The app scales down seamlessly to tablets and desktops, offering optimized layouts and enhanced visuals. It also includes dark mode and adjustable fonts. These mock-ups give full insight into the design and functionality of the app.

App Icon:

Figure 5. The icon of the app

Colour Schemes:

Rich and full of contrast, the colour palette is dynamic. Deep, mysterious blues and purples of the primary colours-like #6200EE and its variant #3700B3-are complemented with lively accents in light cyan #ADD8E6 and teal #03DAC5. The greys and mellow blacks balance well with #333333 and #989797 shades. The stark black, #FF000000, and pristine white, #FFFFFFFF, give a sharp contrast. For highlights, the fiery orange of the error colour #D14706 and button colour ringing in energy has added a bold touch.

UI Asset Scale:

We promise that our app will work or display perfectly on both phones and tablets. It will automatically adjust to fit any screen size, no matter how big or small.

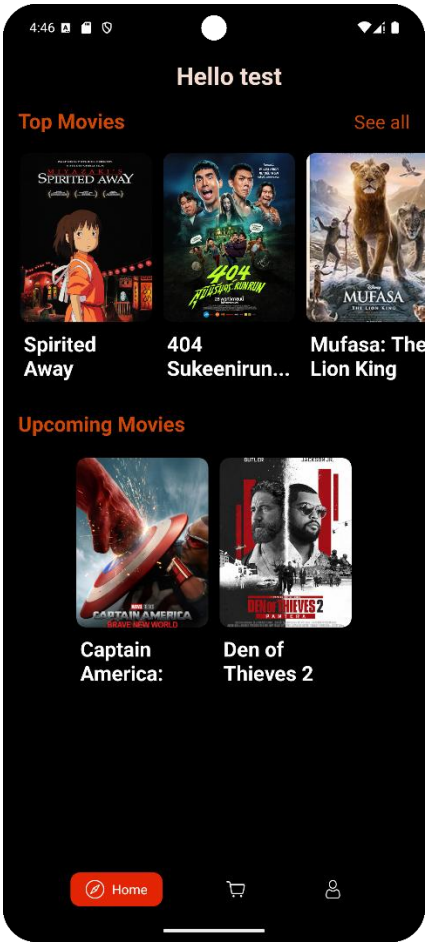

Figure 6. Phone scale

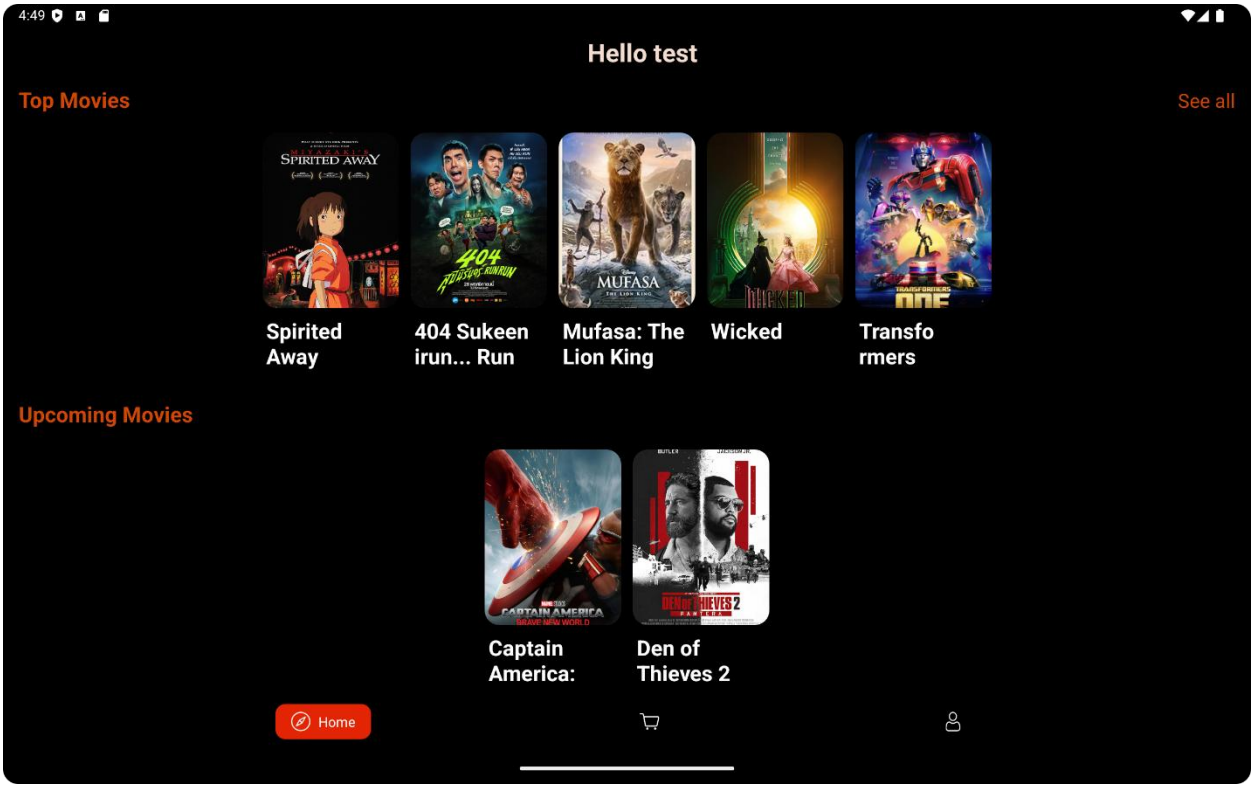

Figure 7. Tablet scale

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