Mobile Apps 2024

Assignment 2

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Peterson Eduardo Sampaio Silva

71557

Introduction

As part of this project, we were tasked with screen navigation and an application stage including borders, images, buttons, and other components. In addition to ensuring that the interface was visually appealing and engaging, it should be intuitive and user-friendly, with easy navigation and clear instructions.

Development Process

Initial Planning

The first few times I read and re-read the project it was difficult to anticipate and understand what was required. However, with the help of the code provided, I could find a guide to follow and a more precise foundation.
Our initial plan was to create the easiest and simplest interface possible, reaching all the areas requested in the project.

Application Development

Based on the MainActivity, we use some navigation controls using "RememberNavController()" to allow navigation between screens. We can then identify our TopAppBar by providing core patterns, layout, and images. Then we end with AppNavigation, where we control the application's screen navigation.

This MovieViewModel displays the titles, durations, descriptions, and other information of films on posters. Also, there is "fun getMovieById" that retrieves movies based on their IDs.

Our next section is AppNavigation, which contains some other composables, val's, and NavHosts. This part of the program enables us to define the navigation between application screens as well as padding to fill the layout, in addition to defining the logic for each screen and the passage of data between them.

ProjectButtons page contains three composite functions (@Composable) which represent the buttons that we want to display. It is necessary to provide a callback function (onClick) with each button. This callback function is called when a button is clicked to execute the action.

Routes is a sealed class in the code that represents different routes. There are three screens within this class: FirstScreen, SecondScreen, and ThirdScreen. Each object has a route property that defines the route associated with it, such as "first_screen", "second_screen" and "third_screen". The approach helps organize navigation routes in an app and avoid typos.

The First Screen displays a grid of movies, and clicking on an item navigates to the second screen showing details about the movie selected. On screen 2, the user can select the number of seats and purchase tickets for the selected film. A final screen, Screen3, displays a message and a return button to Screen1.(Which in this case we are not using, but I had difficulty removing it from our project because the program gave an error.)

Challenges Encountered

It is fundamental to understand the Compose Framework. As a new UI development platform for Android, Jetpack Compose library requires an understanding of declarative UI composition and component lifecycles.

It was challenging to navigate between screens, but that was the purpose of this project, to improve our navigation understanding. This functionality must be implemented efficiently and intuitively, especially when it comes to passing data between screens.

UI and UX design is an area I should focus on. Creating an attractive and functional user interface is essential to the user experience. Need to consider material design principles and UX best practices when designing and implementing my app's user interface.

Error Handling and Validation

Provide clear and detailed feedback to users regarding errors they have encountered. This type of error message could be displayed as a message on the user interface, as a notification, or even as a troubleshooting prompt.

Conclusion

This project has been a valuable learning experience for me. During the development process, I gained a deeper understanding of Jetpack Compose. It has been challenging to navigate between screens and implement UI components, but I have been able to overcome those challenges. My skills and confidence in app development have grown as a result.

In general, this project was a valuable opportunity for learning and growth. My work on Screens has made me proud and I look forward to applying those skills and knowledge to future Android projects.