

PROJECT DESIGN PHASE - 1 SOLUTION ARCHITECTURE

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Team Members	Guddanti Jyotish Kumarr - 21BCE9025 Ardhala Yamini Padmavathi - 21BCE9240 Ayyapusetty Harshini Kumari - 21BCE9222 Gudla Deepak - 21BCE8456
Project Name	Snack Ordering Application
Maximum Marks	4 Marks

Solution Architecture :

The architecture design of the snack Ordering app involves several steps to ensure a well organised, scalable, and maintainable system. Below are the certain steps of architecture building.

1. Login and register Activity
2. Ui design of snack items catalog
3. Cart Activity
4. Payment section

Login and Register Activity:

The solution architecture for the Login and Register Activity encompasses a user-friendly interface designed with Jetpack Compose. This UI incorporates essential components such as text fields for email and password input, along with a seamless navigation flow between the login and registration screens. Optionally, Firebase Authentication is integrated for a secure user authentication process, providing a robust and scalable solution for user identity management. ViewModel architecture is employed to manage the business logic associated with user authentication, including input validation and communication with Firebase Authentication services. The Navigation Component is utilized to define and manage the navigation flow, ensuring a smooth transition between login and registration screens.

UI Design of Snack Items Catalog:

The architecture for the UI design of the Snack Items Catalog leverages Jetpack Compose to create an engaging and intuitive interface. This UI presents snack items with rich visuals, including images, names, and prices, and incorporates features such as search, filtering, and sorting for a seamless browsing experience. The Repository Pattern is employed to abstract data access, facilitating the separation of concerns and promoting a modular structure. This architecture ensures the efficient retrieval and display of snack catalog information while maintaining scalability as the catalog expands.

Cart Activity:

The Cart Activity architecture centers around a user-friendly UI developed with Jetpack Compose, providing an interactive and visually appealing shopping cart experience. ViewModel architecture is implemented to manage the business logic associated with the shopping cart, including adding/

removing items, updating quantities, and calculating the total cost. The Repository Pattern ensures efficient communication between the UI and the underlying data, managing the shopping cart's state. Navigation Components are utilized to facilitate smooth navigation between the snack catalog and the cart, creating a cohesive and user-centric shopping flow.

Payment Section:

The architecture for the Payment Section involves the integration of a secure and scalable payment gateway solution. The UI, developed with Jetpack Compose, includes a seamless payment section where users can input payment details and complete transactions. ViewModel architecture handles the business logic associated with payment processing.

