Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	25 October 2023
Team ID	591092
Project Name	Snack Squad : A Customizable Snack Ordering and Delivery App

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2
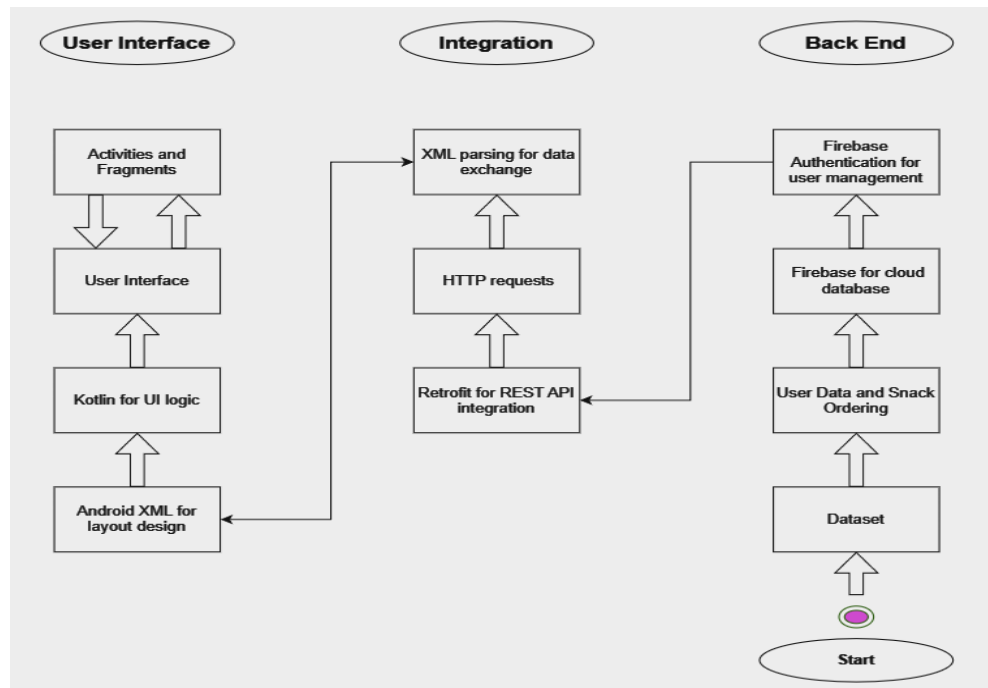
Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interface provides a visually appealing and intuitive design that makes it easy for users to browse menus.	XML Layouts, Material Design guidelines
2.	Mobile App	The mobile app allows users to browse menus, customize orders and it also offers convenience, a user-friendly interface.	Kotlin, Android Studio
3.	Database	A database will help app to store and manage various types of information, such as user profiles, menu items, orders, payment details, and delivery addresses.	Room Database, SQLite
4.	Navigation	Navigation helps users move smoothly between different sections, such as browsing menus, selecting items, customizing orders, and checking out.	Navigation Component, Deep Linking
5.	Authentication	Authentication is used to ensure secure access to user accounts and it typically involves the use of login credentials, such as a username and password, to verify the identity of the user.	Firebase Authentication, OAuth2
6.	Push Notifications	The push notifications is used to send timely updates and notifications to users this also include order confirmations, order status updates, delivery tracking, promotional offers, and special offers .	Firebase Cloud Messaging, Pusher, or OneSignal

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	User Profiles	user profiles are used to personalize the experience for each user which include storing and utilizing information such as user preferences, dietary restrictions, favorite restaurants, previous orders, and delivery addresses.	Firebase Realtime Database, SQLite
2.	Cart Management	cart management is used to allow users to add, remove, and modify items in their cart before placing an order.	Local data storage, LiveData
3.	Checkout and Payment	checkout and payment characteristics are used to facilitate the seamless completion of an order. Users can review their order details, select a payment method.	Payment gateways (e.g., Stripe, PayPal), In-App Billing
4.	Location-Based Services	Location-based are used to provide users with accurate restaurant recommendations based on their current location.	Android Location Services, Google Maps API
5.	Feedback Mechanism	Feedback mechanism is used to gather user reviews and ratings for restaurants and delivery services. This helps other users make informed decisions .	Firebase Firestore, Analytics

References:

https://c4model.com/

https://www.leanix.net/en/wiki/ea/technical-architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d