

## Project Design Phase-II

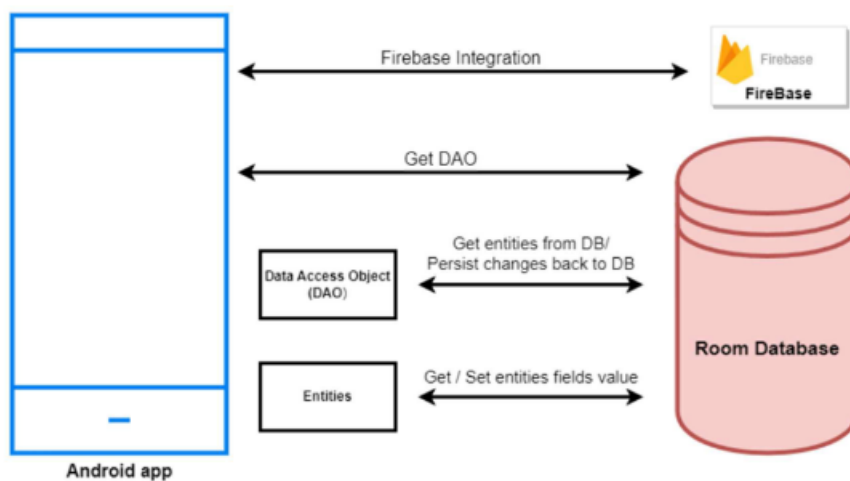
### Technology Stack (Architecture & Stack)

Date	23 October 2023
Team ID	TEAM-593379
Project Name	SNACK SQUAD
Maximum Marks	8 Marks

## Technical Architecture:

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

### Architecture



**Table-1: Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface Design	UI design is concerned with the overall visual appeal of the interface	Jetpack Compose
2.	User Experience	The goal is to ensure a seamless, enjoyable, and meaningful experience across all touchpoints.	Jetpack Compose animations
3.	Authentication	Credentials are the pieces of information used to prove one's identity	Fire base Authentication.
4.	Application Logic-1	Logic for a process in the application	Kotlin
5.	Application Logic-2	This part of application logic deals with how data is received, processed, stored, and retrieved within the application	Fire base cloud Function
6.	Database	Data Type ,Configurations etc.	NoSQL
7.	File Storage	Store images and videos in snap	Firestore Cloud Storage
8.	External API-1(Storage API)	Enable users to share and access files from cloud storage services.	Google Drive
9.	External API-2(Emoji API)	Expanding share 's emoji library by integrating additional emoticon packs	Twemoji API
10.	Cloud Functions	Implement server-side logic	Firestore Cloud Function
11.	Testing and Debugging	Test and debug the app	Android Studio tools
12.	Infrastructure Server	For Seamless chatting and connectivity	Firestore server
13.	Documentation	Document code and app structure.	GitHub

**Table 2:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	MVVKotlin
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Firebase security rules and authentication.
3.	Scalable Architecture	Ability to handle growing user and message volume.	Firebase scalability features.
4.	Real-time Messaging	Instant message delivery and updates.	Firebase Realtime Database
5.	Push Notifications	Real-time alerts for new messages.	Firebase Cloud Messaging (FCM).
6.	Offline Access	Use the app without an internet connection.	Firebase Realtime Database or Cloud Firestore
7.	Testing & Debugging	Ensure app stability and resolve issues.	Android Studio tools, Firebase testing.
8.	Chat History	Access and search past messages.	Firebase Realtime Database or Cloud Firestore.
9.	Availability	Ensures uninterrupted service with load balancing, distributed servers, and automatic failover.	Firebase Realtime Database, Firebase Cloud Functions
10.	Performance	Ensures the app is accessible at all times. Achieved through distributed servers and Firebase's real-time syncing.	Firebase Realtime Database or Cloud Firestore for synchronized data across multiple servers and regions.
11.	Search and Chat History	Enabling users to search for older messages and access their chat history.	Firebase Realtime Database