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

Date	30 October 2023
Team ID	Team - 591023
Project TItle	News Headline App

Technical Architecture :

Reference :

https://lucid.app/lucidchart/4bb421e6-0847-4334-82f5-83dbce3935dd/edit?viewport_loc=-436%2C63%2C2861%2C1661%2C0_0&invitationId=inv_5434b3b2-dc6b-4249-8f6c-cf62e9debecc

Table - 1: Components & Technologies

S.No.	Component	Description	Technology
1.	User Interface Design	Process of creating a visually appealing user friendly interface	Figma
2.	User Interface Development	Coding and implementation of designed user interface.	Jetpack Compose
3.	Application Logic - 1	Developing the Application	Language - Kotlin Toolkit - JC Design Pattern - MVVM
4	Application Logic - 2	To manage dependencies	Dagger Hilt/Koin
5	Application Logic - 3	Handling asynchronous tasks	Coroutines
6	Local Database	Storing user preferences	SQLite

7	Cloud Database	Storing user login credentials	Firebase Realtime Database, Firestore
8	Login	In-App authentication, to give preferable news	Firebase Authentication
9	API Client	To manage API calls within App	Retrofit
10	External API	Fetching News Headline	NewsAPI, Bing News Search API
11	Cloud Services - 1	Login, Storage based API	GCP (Google Cloud Platform)
12	Cloud Services - 2	News API	Azure

Table - 2: Application Characteristics:

S.No.	Component	Description	Technology
1.	Open-Source Framework	Using an Open Source UI toolkit / framework to develop front end of mobile application	Jetpack Compose
2.	Security Implementations	N/A	N/A
3.	Scalable Architecture	Scalability issues can be resolved using cloud services	Google Cloud Platform
4	Availability	We can increase the availability using cloud management and various online distribution softwares	Google Cloud Platform, Google Play Store
5	Performance	Using cloud based services, to increase the app's scalability and reliability	GCP (Monitoring Cache), Jetpack Compose