

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	26 October 2023
Team ID	SI-GuidedProject-587104-1696656485
Project Name	An Android Application for Keeping Up with the Latest Headlines
Maximum Marks	4 Marks

Technical Architecture:

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

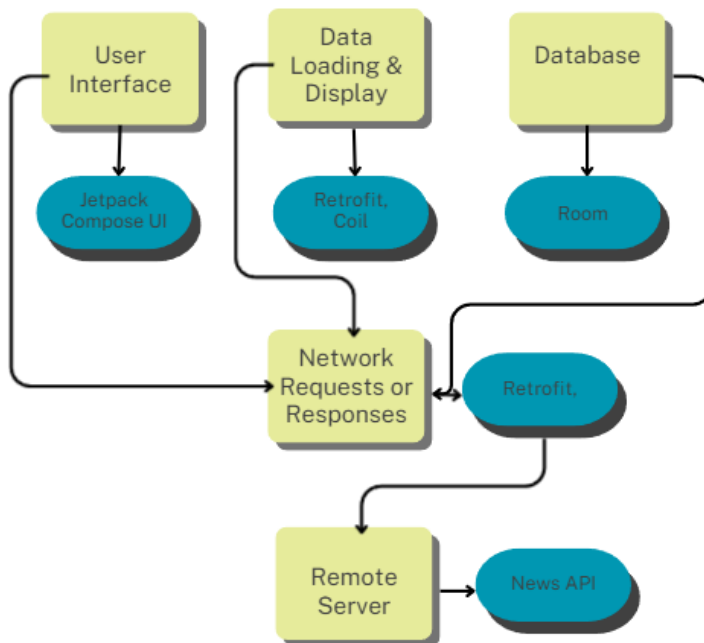


Table-1 : Components & Technologies:

Component	Description	Technology
User Interface (UI)	The front-end part of the application, responsible for displaying news articles and handling user interactions.	Jetpack Compose, XML (for layouts)
Data Fetching Service	Responsible for fetching news articles from external sources.	Retrofit (HTTP client), RESTful APIs
Image Handling Service	To load and cache images associated with news articles.	Coil (Image loading library)
Local Data Storage	Cache or store data locally on the device for offline access.	Room (Local database)
User Authentication	User login and authentication for personalized experiences.	Firebase Authentication (if required)
External APIs	Third-party APIs for fetching news articles and related data.	News API, OpenWeatherMap API, or other news sources APIs
Analytics	Collecting user behavior data for analysis and improvements.	Firebase Analytics, Google Analytics (optional)

Table-2: Application Characteristics:

Characteristic	Description	Technology
User-Friendly UI	An intuitive and visually appealing user interface for news browsing.	Jetpack Compose, XML (for layouts)
Real-Time Updates	Frequent updates to provide users with the latest news headlines.	Retrofit (for real-time data fetching), Push Notifications
Offline Access	The ability to read previously fetched articles when offline.	Local database (Room), caching mechanisms
Personalization	Customization based on user preferences and behavior.	User profiles, machine learning (if applicable)
Security	Ensuring user data and interactions are secure.	SSL/TLS, Firebase Authentication (if applicable)
Scalability	The application's ability to handle increased user load.	Scalable server infrastructure, CDN (for images), Load balancing
Cross-Platform Support	The ability to expand to other platforms (iOS, Web, etc.).	Kotlin Multiplatform Mobile (if applicable)
Analytics and Insights	Gathering user behavior data for app improvement and advertising.	Firebase Analytics, Google Analytics (optional)
Monetization	Strategies to generate revenue from the app.	Freemium model, Advertisements, Affiliate Marketing, Data Analytics, etc.

References:

1. [Android Developer Documentation](#)
2. [Jetpack Compose Documentation](#)
3. [Retrofit Documentation](#)
4. [Coil Documentation](#)
5. [Android Developers YouTube Channel](#)
6. [Medium Android Developers](#)
7. [GitHub](#)
8. [Stack Overflow](#)
9. [Udacity](#)
10. [Pluralsight](#)