

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

Date	24 October,2023
Team ID	590920
Project Name	An Android Application for Keeping Up with the Latest Headlines
Maximum Marks	4 Marks

Technical Architecture:

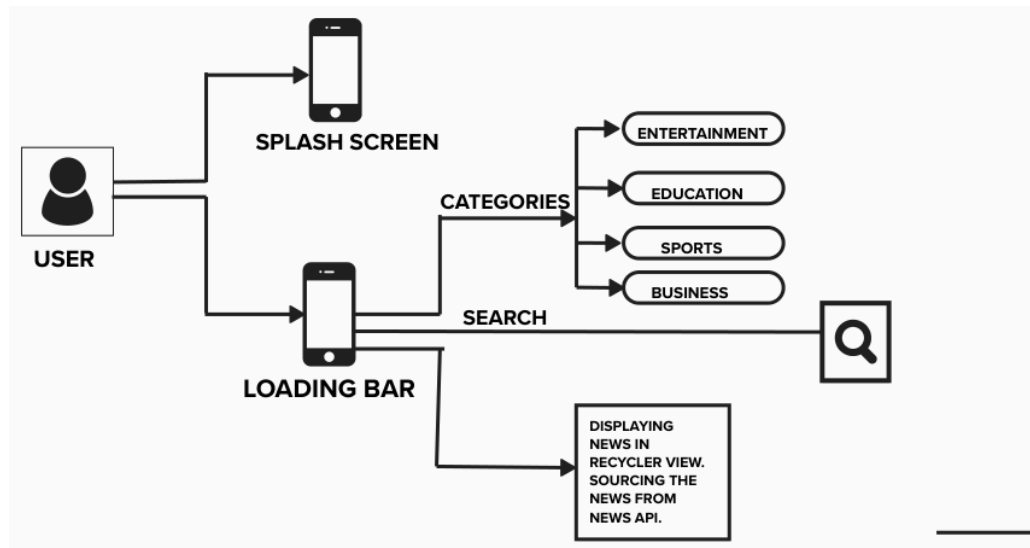


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	XML layouts using Android's XML layout files, integrated with Java or Kotlin code for dynamic UI updates.
2.	Data Fetching and Parsing	This component fetches technology news from various sources, parses the data, and prepares it for display.	Networking: Retrofit or Volley for making API requests. JSON Parsing: GSON or Moshi for parsing JSON responses.
3.	Content Source	The app should aggregate news from multiple reputable technology news sources	Integration with RSS feeds, RESTful APIs, or custom web scraping tools for data retrieval.
4.	Search Functionality	Allows users to search for specific articles or topics.	Implement a search feature using Android's built-in search framework or a custom search algorithm.
5.	User Authentication	Optionally, users can create profiles or sync preferences across devices.	Firebase Authentication or custom authentication mechanisms using OAuth 2.0 or API keys.
6.	Personalization and Recommendations	The app can offer personalized news recommendations based on user preferences and reading history	Custom recommendation algorithms, machine learning libraries (e.g., TensorFlow), or integration with third-party recommendation services.
7.	Documentation	Provides code and project documentation	Javadoc, Doxygen, or other documentation tools

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	User Friendly	A user friendly and intuitive interface for easy navigation. It includes features like menus and card based layouts.	Material Design guidelines, Android UI components.

S.No	Characteristics	Description	Technology
2.	Content Aggregator	Aggregates news articles from various sources and categorizes them into sections like world news, technology etc.	Web Scraping ,RSS feeds, APIs for news sources.
3.	Search Functionality	Allows users to search for specific topics, keywords or articles, providing a convenient way to find news.	In-app search, integration with search engines.
4.	Push Notification	Real-time notifications for breaking news and updates. Keeps users informed about important developments.	Firestore Cloud Messaging(FCM),push notification services.
5.	Personalisation	Offers a personalized news feed by suggesting articles based on user preferences and browsing history.	Machine learning algorithms, user profiling.