

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

Date	27 October 2023
Team ID	590884
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 & table2

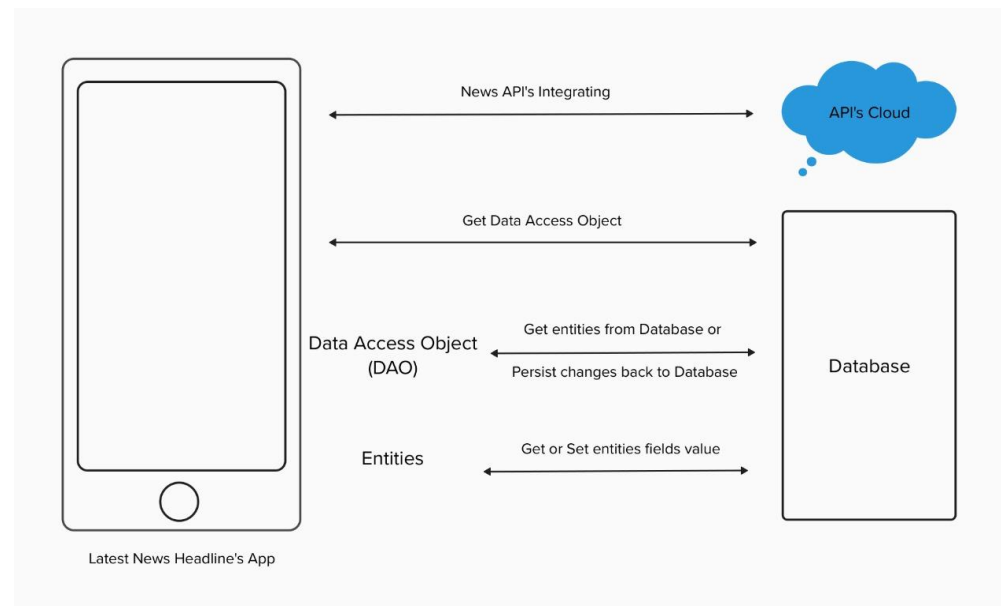


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The front-end interface presenting news content, search functionality, bookmarks, and user settings.	Android XML, Material Design Guidelines.
2.	Bookmark Management	Module for saving, organizing, and retrieving bookmarked articles.	Local SQLite database for storage
3.	User Feedback and Reporting	Feature for users to submit feedback, report issues, or contact customer care.	In-app forms, API for submitting feedback
4.	Database	Stores user data, bookmarked articles, and app settings.	Relational or NoSQL database management systems (DBMS)
5.	Content Database	Stores curated news articles, including text, images, and metadata.	Content management system (CMS) or cloud-based storage.
6.	News APIs	Integrates with various news providers' APIs to fetch the latest headlines and articles.	RESTful or GraphQL APIs
7.	External Databases	Accesses third-party databases for additional news sources and references.	Database connectors, data extraction tools

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Security Implementations	Protecting user data and application integrity, ensuring secure user authentication, and safeguarding against cyber threats.	Encryption, secure APIs, authentication and authorization, regular security audits, penetration testing.
2.	Scalable Architecture	The application should be able to handle a growing number of users and news content without compromising performance.	Load balancing, cloud-based infrastructure, microservices architecture.
3.	Performance	Ensuring that the application offers a smooth and responsive user experience, with fast content loading and search results.	Efficient UI rendering, image and content optimization, content delivery networks (CDN), search indexing, caching.

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

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