

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

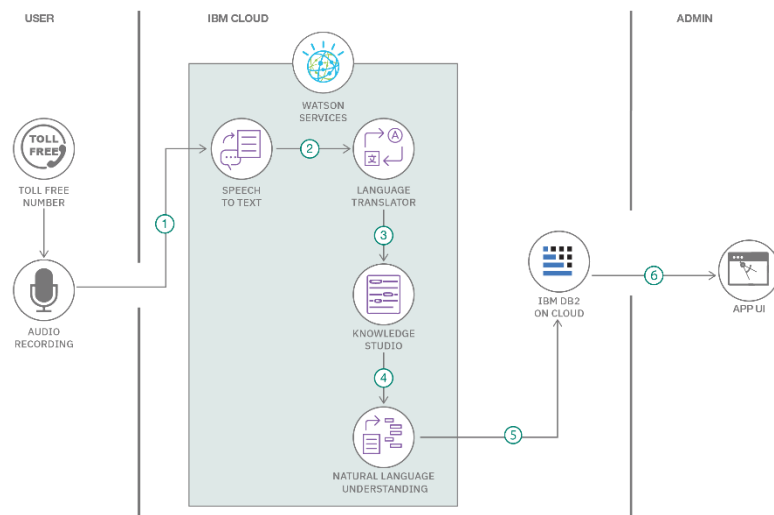
Date	26 October 2023
Team ID	590943
Project Name	ChatConnect - A Real-Time Chat And Communication App
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>



Guidelines:

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

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.	Kotlin, XML
2.	Application Logic-1	Logic for a process in the application	Kotlin
3.	Application Logic-2	Logic for a process in the application	Firebase service
4.	Application Logic-3	Logic for a process in the application	Firebase Realtime database
5.	Database	Data Type, Configurations etc.	Firebase
6.	Cloud Database	Database Service on Cloud	Firebase Database
7.	File Storage	File storage requirements	Local Filesystem
8.	External API-1	Purpose of External API used in the application Helps the user solve problems	Chatgpt API
9.	External API-2	Purpose of External API used in the application	
10.	Machine Learning Model	Purpose of Machine Learning Model	Not Used
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Not Used.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Utilization of open-source frameworks such as Lottie Animation to enhance the application's visual appeal.	Lottie Animation
2.	Security Implementations	Implementation of security measures, including Firebase Authentication, to safeguard user data and access control.	Firebase Authentication
3.	Scalable Architecture	Adoption of a scalable microservices architecture, managed with Kubernetes, to accommodate growth and demand.	Technology used
4.	Availability	Ensuring high availability through the use of load balancers and a distributed server architecture for robust performance and reliability.	Technology used
5.	Performance	Design considerations, including caching strategies and integration with Content Delivery Networks (CDN), to optimize application performance and responsiveness.	Caching strategies

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>