Project Design Phase-II
Technology Stack (Architecture & Stack)
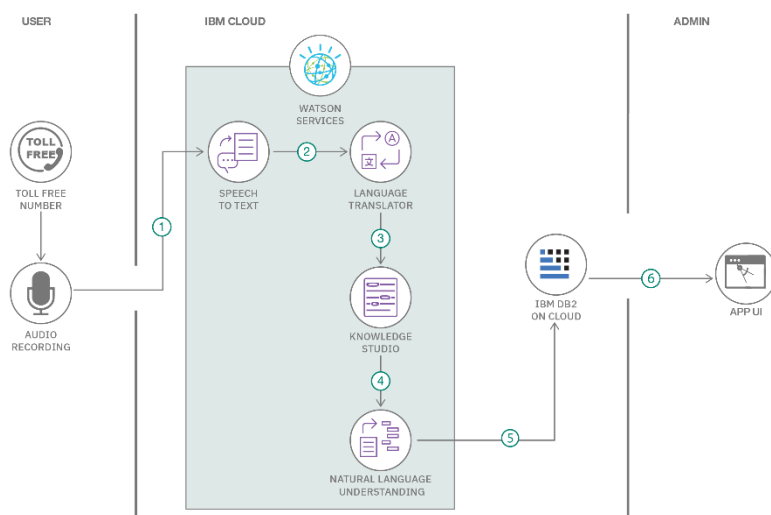
Date	03 October 2022
Team ID	PNT2022TMID19102
Project Name	Project - Personal Assistance for Seniors Who Are Self-Reliant
Maximum Marks	4 Marks

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:

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

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with the mobile application UI	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Updates medicine schedule,doctor's appointments and suggest diet plan .	Java / Python
3.	Application Logic-2	Create a speech notification with the medicine details at the scheduled time.	IBM Watson STT service
4.	Application Logic-3	Interactions with the IOT device.	IBM Watson Assistant
5.	Database	Medication schedule and doctor's appointments.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements - App code and IoT credentials are stored	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To get the data from the IBM cloud	IBM Weather API, etc.
9.	External API-2	To get the login credentials in IBM DB2	Aadhar API, etc.
10.	Machine Learning Model	Trained to recognize certain types of objects	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Host the server and application	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	To develop the application interface, we use MIT App Inventor	App Inventor MIT App Inventor
2.	Security Implementations	To secure the users login credentials and personal information	e.g. SHA-256, OWASP

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	To enhance the scalability o application database	IBM auto scaling
4.	Availability	To make use the application and data available to the registered users	IBM Cloud load balancer
5.	Performance	To increase the performance , the application is hosted in the high performance instance	IBM instance

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