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

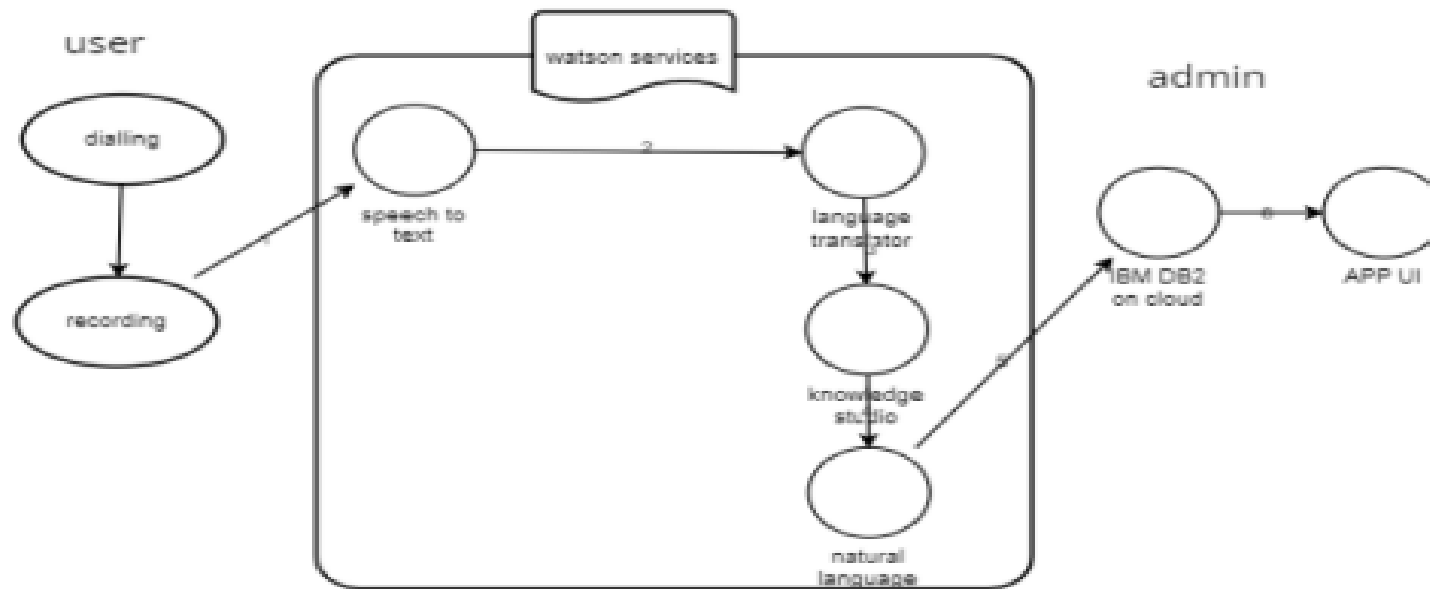| Date	03 October 2022
Team ID	PNT2022TMID29008
Project Name	Project - Personal Assistant for Seniors who are Self-reliant
Maximum Marks	4 Marks

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile application	HTML, CSS
2.	Application Logic-1	Enter the details of the medicines in a weekly basis	Javascript / Python
3.	Application Logic-2	Application gets the medicine data from the database	IBM Watson IoT API Call data
4.	Application Logic-3	Converts the text into speech format to pronounce for the user	IBM Watson Assistant
5.	Database	Medicine name, medicine time on daily basis	MySQL
6.	Cloud Database	Call the data IBM Cloudant is used and user login credentials	IBM DB2, IBM Cloudant
7.	File Storage	App code and IoT credentials are stored and also the API keys	IBM Block Storage
8.	External API-1	To get the medicine box status whether it is open or not	IBM box status API.
9.	External API-2	To get the login credentials in IBM DB2	User name and Password API
10.	Machine Learning Model	To convert the text into speech for voice command the medicine details	Text to speech.
11.	Infrastructure (Server / Cloud)	To host the server and application	Cloud Foundry, Node Red

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	To develop the application interface	MIT APP INVENTOR
2.	Security Implementations	To secure the users login credentials and personal information	. SHA-256, OWASP
3.	Scalable Architecture	To scale the application database	IBM Auto scaling
4.	Availability	To make use the application and data are available for 24/7	IBM Cloud load balancer
5.	Performance	To increase the performance of the application inhosted in the high performance instance	IBM instance