

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

Date	15 October 2022
Team ID	PNT2022TMID24841
Project Name	Personal Assistance for Seniors who are Self-Reliant
Maximum Marks	4 Marks

TECHNICAL ARCHITECTURE :

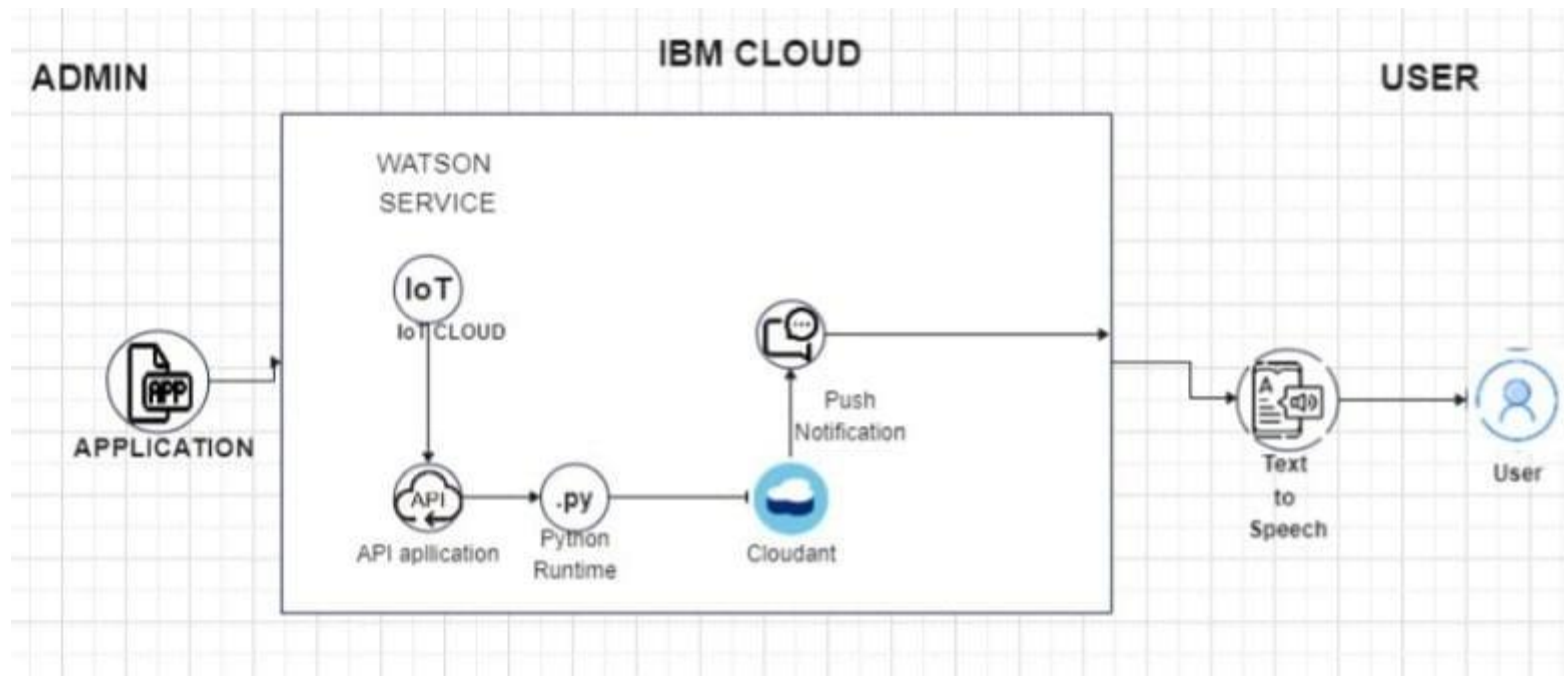


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile App	HTML, CSS, JavaScript.
2.	Application Logic-1	Mobile app to enter the details of the medicine	Python, JavaScript, CSS, HTML
3.	Application Logic-2	Gets the Medication data from the database	IBM Watson IoT API call data
4.	Application Logic-3	Converts the text to speech to pronunciation for the user	IBM Watson Assistance
5.	Database	Medication time and pill names on daily bases	MySQL
6.	Cloud Database	Call the data IBM Cloudant is used and use login credentials	IBM DB2, IBM Cloudant
7.	File Storage	App code and IoT credentials are stored and API keys	IBM Block Storage
8.	External API-1	To get the medicine box status Open or not	IBM box status API
9.	External API-2	To get the login credentials in IBM DB2.	Username and password API
10.	Machine Learning Model	To convert the text into speech for the voice command on the details of the tablets.	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 We use MITApp Inventor	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 of the application and data available for 24/7	IBM cloud load balancer
5.	Performance	Application is hosted in the high-performance instance to increase the performance	IBM instance