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

Date	01 November 2022
Team ID	PNT2022TMID40129
Project Name	Project – Personal Assistance for Senior People who are Self Reliant.
Maximum Marks	4 Marks

Technical Architecture:

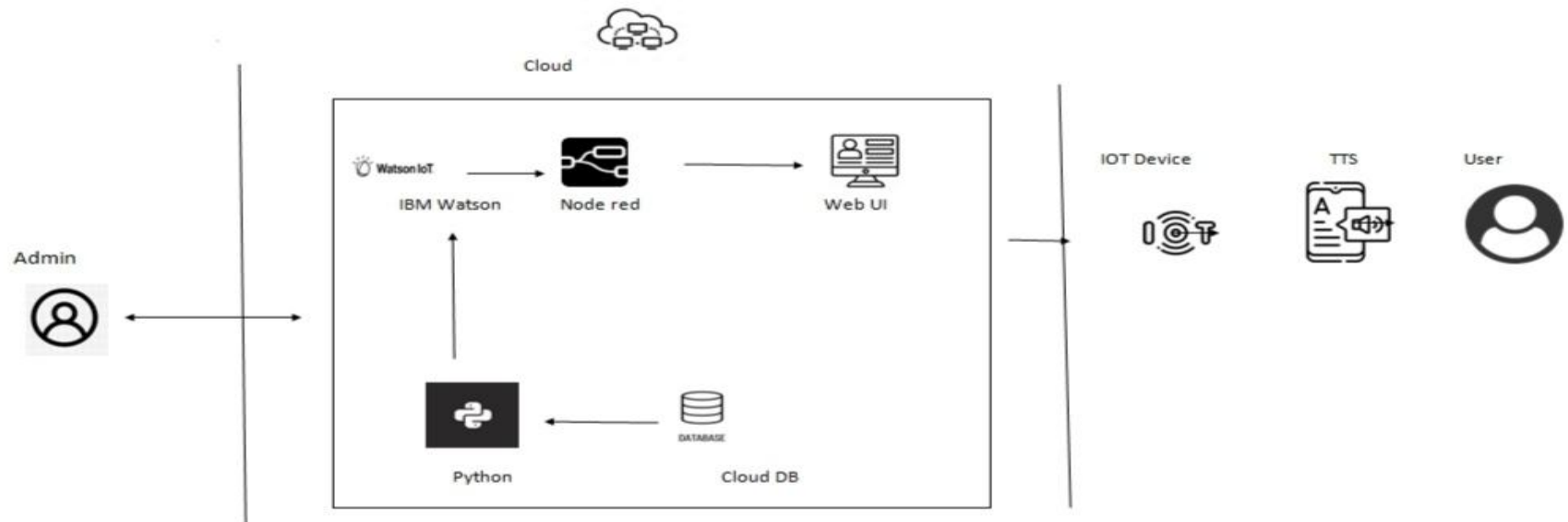The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user Interacts with Mobile Application	HTML, CSS.
2.	Application Logic-1	Gathering medicine details and check the Timings.	Python
3.	Application Logic-2	Get the medicine details from the databases.	IBM Watson IOT API call data
4.	Application Logic-3	Convert the text into speech format to pronounce for the user	IBM Watson Assistant
5.	Database	Medicine name , Dosage and Medicine time on daily basis.	MySQL
6.	Cloud Database	Call the IBM cloud and is used for 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 concert 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	List the open-source frameworks used	MIT APP INVENTOR
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	SHA-256, OWASP
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	IBM auto scaling
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	IBM Cloud load balancer
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	IBM instance