Project Design Phase – 2

Technology Stack(Architecture & Stack)

Date	16 October 2022
Team ID	PNT2022TMID42536
Project Name	Personal Assistance For Seniors Who Are Self Reliant
Maximum Marks	4 Marks

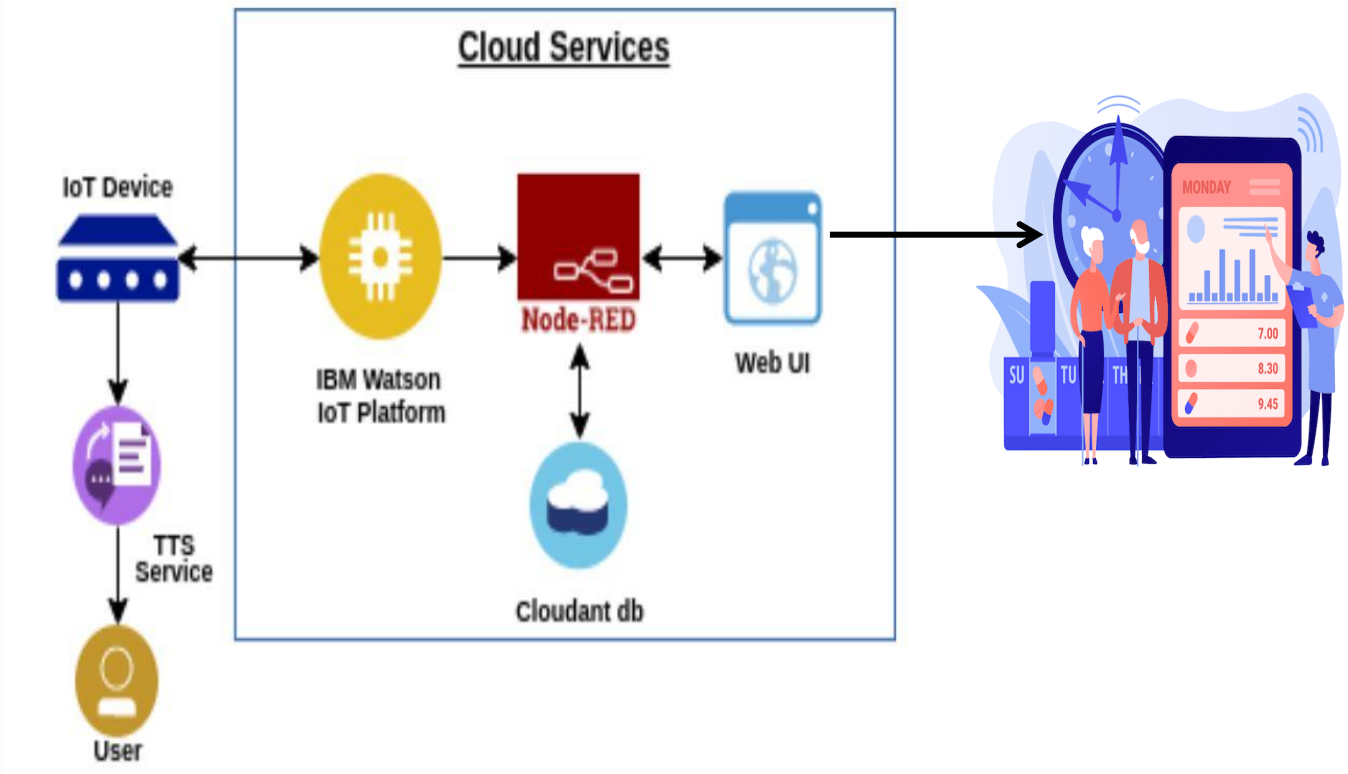

Table – 1 : Components & Technologies

S.No	Component	Description	Technology
1.	User Interface	Users can interact with the Chatbot either by typing text in the Send a Message textbox or by selecting one of the options displayed on the screen.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Reminder will call you automatically to take your medicine at your preferable time.	Java / Python
3.	Application Logic-2	IBM Watson Speech to Text (STT) is a service on the IBM Cloud that enables you to easily convert audio and voice into written text.	IBM Watson STT service.
4.	Application Logic-3	Watson Assistant automatically identifies topics from pre-existing chat.	IBM Watson Assistant.
5.	Database	This feature allows the users to send their daily, weekly, or monthly medical progress reports to the assigned nurses or doctors.	MySQL, NoSQL, etc.
6.	Cloud Database	The alarm can be set for multiple medicines and timings including date, time and medicine description.	IBM DB2, IBM Cloudant etc.
7.	File Storage	File Storage	IBM Block Storage or Other Storage Service or Local Filesystem.
8.	External API-1	API allows access to critical forecasts, alerts, and observations, along with other weather data. The API was designed with a cache-friendly approach that expires content based upon the information life cycle.	IBM Weather API, etc.
9.	External API-2	It contains details including API data format, protocol, and security specifications.	Aadhar API, etc.
10.	Machine Learning Model	With machine learning in healthcare, doctors can have	Object Recognition Model, etc.

		access to the analysis based on electronic health records for the patient.	
11.	Infrastructure (Server / Cloud)	Kubernetes services provide load balancing and simplify container management on multiple hosts. Cloud Foundry is an open source cloud computing platform that makes it faster and easier to build, test, deploy and scale applications.	Local, Cloud Foundry, Kubernetes, etc.

Table – 2 : Application Characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Angular is a platform and framework for building single-page client applications. It implements core and optional functionality as a set of TypeScript libraries that you import into your applications.	The open-source frameworks used like React JS,Django,Angular JS
2.	Security Implementations	A Firewall manages the secure in-flow and out-flow of data in a device. A firewall is used for protection from Unauthorized attacks**.**	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Able to monitor multiple diseases with a common infrastructure. In this architecture, all components are commonly used simultaneously without the interference.	UML has been used.
4.	Availability	Reminding the patient's medication to one of his/her friends or nurses. Reminder remains in the phone's memory, even If the device is switched on and off.	UML has been used.
5.	Performance	An external HTTP(S) load balancer can deliver a mix of static and dynamically-created content to users through one global IP address.	Cloud CDN has been used.