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

Date	16 October 2022
Team ID	PNT2022TMID50096
Project Name	IOT based personal assistance for seniors who are self-reliant
Maximum Marks	4 Marks

Technical architecture

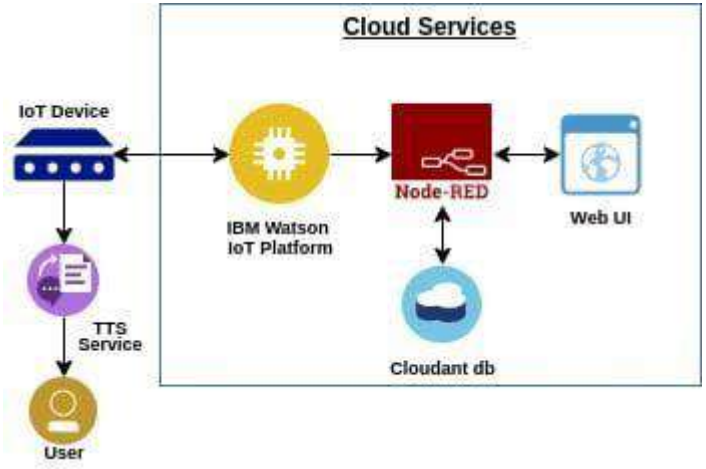

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	Wi-fi,Bluetooth and Sensors
2.	Application Logic-1	Logic for a process in the application	Python, IDLE
3.	Application Logic-2	Logic for a process in the application	IBM Watson Service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Cloud Service
5.	Database	Data Type, Configurations etc.	Cloudant DB
6.	Cloud Database	Database Service on Cloud	MySQL,NoSQL
7.	File Storage	File storage requirements	Stored Area Network(SANs)
8.	External API-1	Purpose of External API used in the application	Location Tracking
9.	External API-2	Purpose of External API used in the application	Health Monitoring
10.	Machine Learning Model	Purpose of Machine Learning Model	Make Data- driven Mode
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, metes.etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Data, Collector, visualization & device Management
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Outdated Software OS, incorrect,access control, disabling remote access

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	To help monitor their elderly people easier
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Available in we-watch & sensor belt
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Monitor & tracking the elderly people

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