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

Date	15 October 2022
Team ID	PNT2022TMID49911
Project Name	Personal assistant for seniors who are Self-Reliant

Technical Architecture:

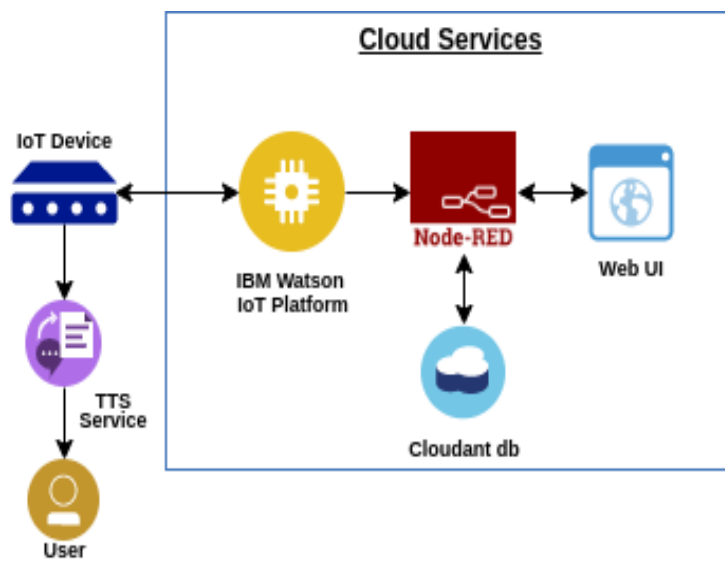**Example: Personal Assistant for seniors who are self-reliant**

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with Mobile application	C, Python
2.	Application Logic-1	Developing application	Python
3.	Application Logic-2	To add speech transcription Capabilities to application	IBM Watson TTS service
4.	Application Logic-3	To automatic interactions with customers	IBM Watson Assistant
5.	Database	To create database	MySQL, NoSQL
6.	Cloud Database	Database Service on Cloud	IBM Cloudant
7.	File Storage	Storing data	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To deliver accurate and precious data	IBM Weather API
9.	External API-2	To verify data	Aadhar API
10	Machine Learning Model	To identify and locate objects	Object Recognition Model
11	Infrastructure (Server / Cloud)	To compile and run the apps locally	Local, Cloud Foundry, etc

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	For wiring hardware devices, API and online services	Node RED
2.	Security Implementations	Advanced Encryption standard, data Encryption standard, RSA algorithm	Encryptions
3.	Scalable Architecture	More number of users can be access the data	Automated bootstrapping
4.	Availability	High availability	Cloud computing
5.	Performance	High performance	Adaptive contention window

References:

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