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

Date	16 October 2022
Team ID	PNT2022TMID44066
Project Name	Real Time Communication System Powered by AI for Specially Abled
Maximum Marks	4 Marks

Technical Architecture:

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

Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	AI using for disabled people	HTML, CSS
2.	Application Logic-1	Converts the sign language into human hearing voice in the desired language to convey the message to normal people	Java / Python
3.	Application Logic-2	Converts speech into understandable sign language for deaf and dumb	IBM Watson STT service
4.	Application Logic-3	Making use of convolution neural network to create the model that is trained on different hand gestures	IBM Watson Assistant
5.	Database	Data Set	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	To create user friendly for deaf and dumb	IBM Weather API
9.	External API-2	Easy for communication	Aadhar API
10.	Machine Learning Model	Purpose of Artificial Intelligence Model	Used for deaf and dumb people for conveying their information using signs
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: IBM Cloud Cloud Server Configuration	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open source with many features	HTML
2.	Security Implementations	Secure for people to communicate with each other	Encryptions
3.	Scalable Architecture	Justify the scalability of architecture	Python and Cloud

S.No	Characteristics	Description	Technology
4.	Availability	It is especially used by disabled people	CDMA
5.	Performance	Good to share information with each other by understanding sign gestures	AI