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

Date	16 October 2022
Team ID	PNT2022TMID22447
Project Name	Real time communication system powered by AI for specially abled
Maximum Marks	4 Marks

Technical Architecture:
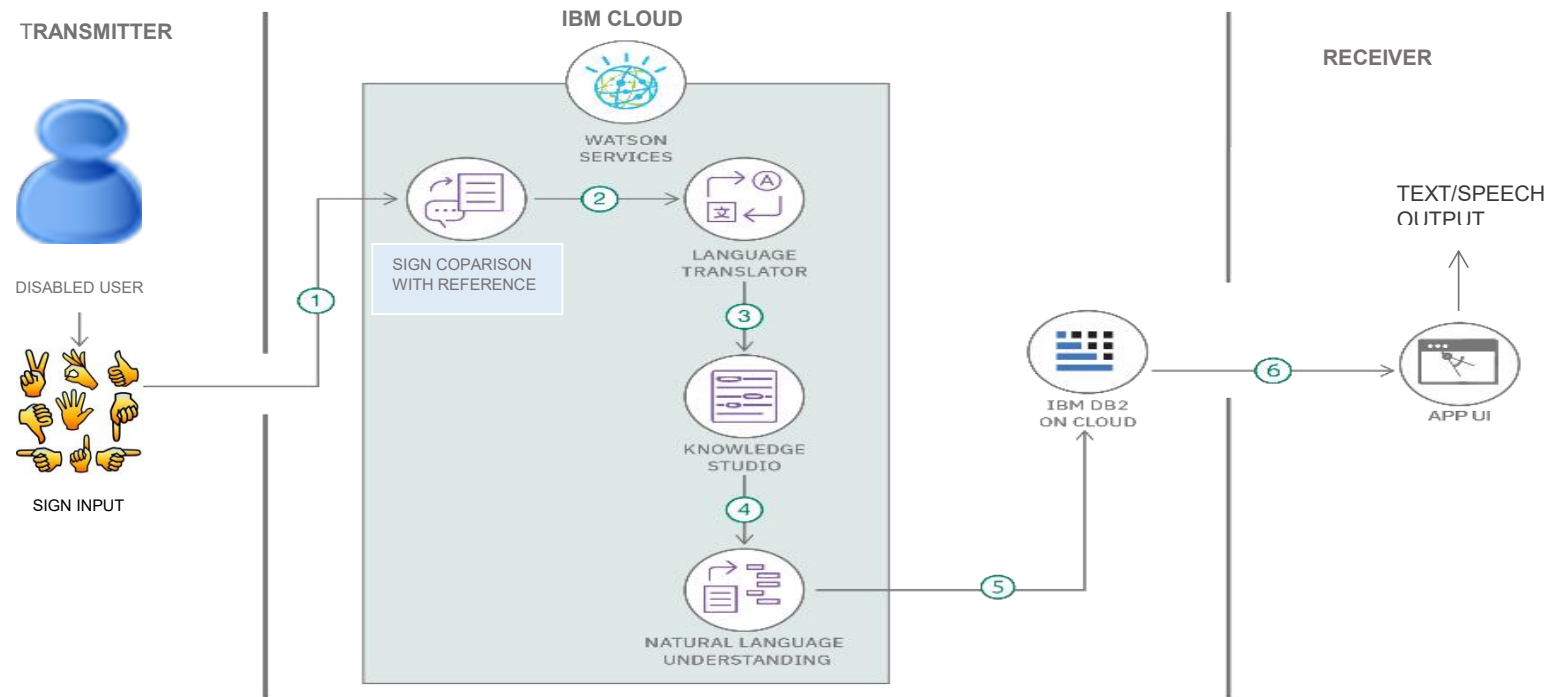
FIG. NORMAL USER PERSPECTVE
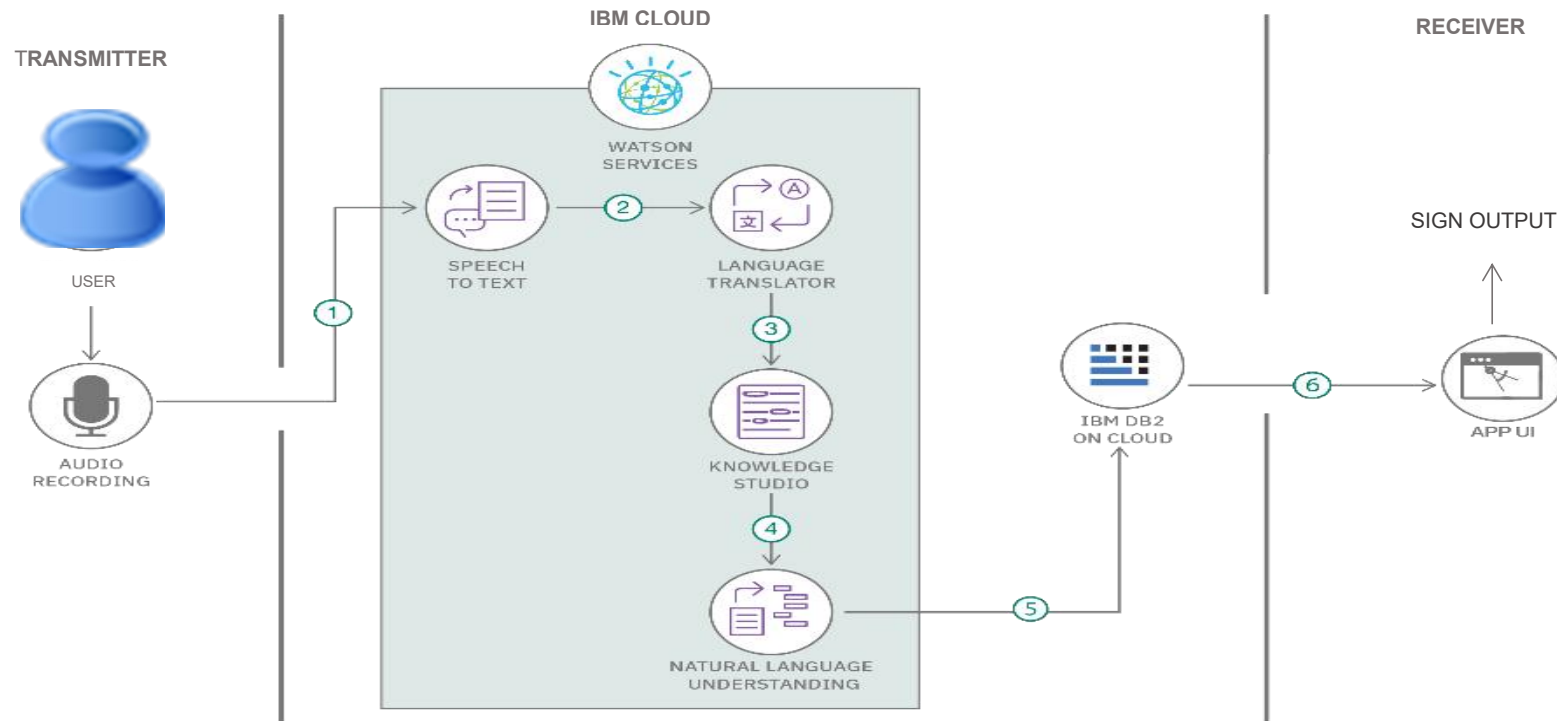
FIG. DISABLED USER PERSPECTIVE

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile App UI	HTML/PYTHON FLASK / Angular Js / React Js
2.	Application Logic-1	Loading image, preprocess and predict	Python
3.	Application Logic-2	User's speech to text transcription services	IBM Watson STT service

4.	Application Logic-3	To automate interactions with users and to resolve issues	IBM Watson Assistant
5.	Database	Data Typing and Configuring	MySQL, NoSQL
6.	Cloud Database	To provide Database Service on Cloud	IBM DB2, IBM Cloudant
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To fetch the weather cases and update the information in app UI	IBM Weather API
9.	External API-2	To provide efficient results based on originality on Aadhar	Aadhar API
10.	Machine Learning Model	Provide features on trained set of objects present in space	Object Recognition Model
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Foundry Cloud Server Configuration : Kubernetes	Local, Cloud Foundry, Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Encourages Open Collaboration	FM system , Visual alert system.
2.	Security Implementations	Cryptographic security ,Data transformed into a secure format, automatic scanning for vulnerabilities	Sesame Phone, Uni, Ava, AXS Map
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Mobile Apps like AccessAble App, HelpTalk App, AML, Mimix Sign Language.
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Screen reader Such as JAWS or HAL, Google Voice Access
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	JABtalk, NotNav and NowNav GPS Accessibility.