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

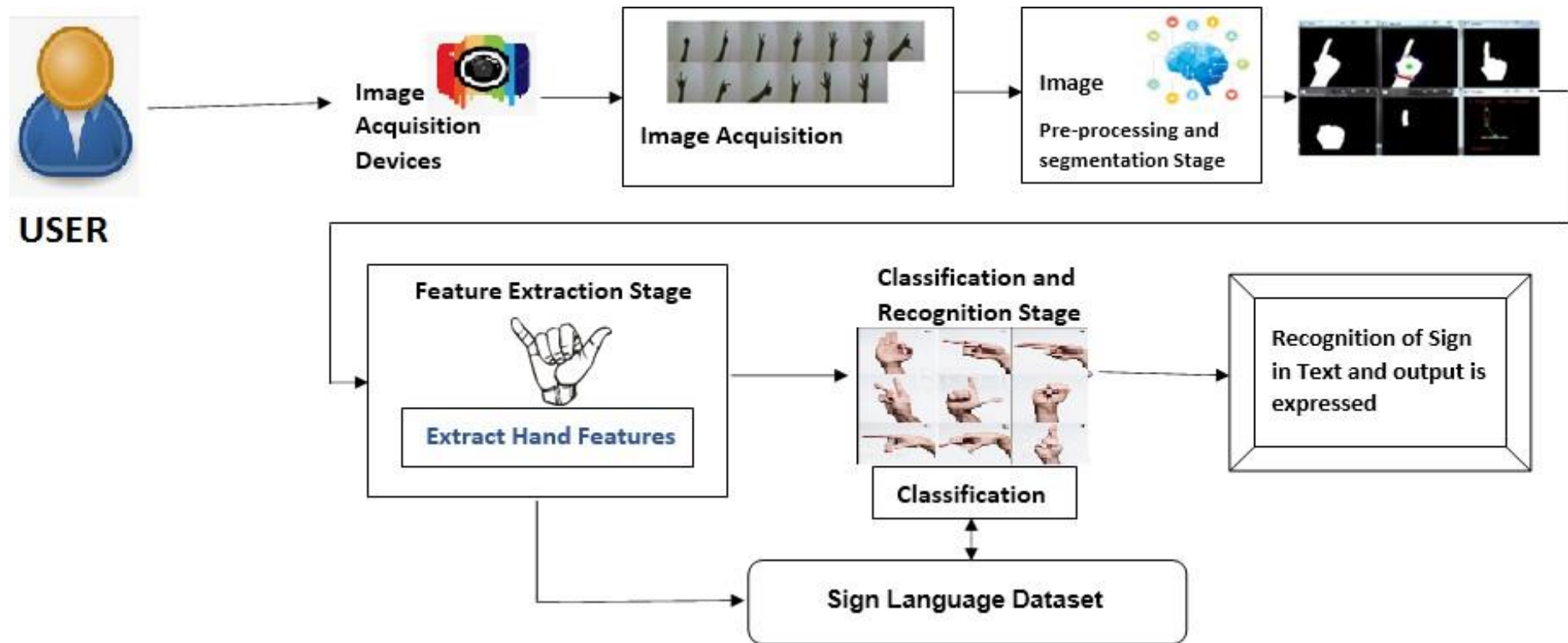| Date	17 October 2022
Team ID	PNT2022TMID23065
Project Name	Project – Real Time Communication System Powered by AI For Specially Abled.
Maximum Marks	4 Marks

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interface is where people interact with computers and communicate with the application.	Python flask, HTML, CSS/JavaScript
2.	Application Logic-1	Frame by frame, the captured image is transformed into greyscale.	Python
3.	Application Logic-2	The retrieved text is voiced over.	IBM Watson service
4.	Database	Data Type – Images of different sign languages	MySQL, Rational database
5.	Cloud Database	Database Service on Cloud	IBM Cloud
6.	File Storage	Technologies used to arrange and keep data on a storage device	IBM Block Storage or Cloud object.
7.	External API-1	defines how normal individuals and deaf people can communicate.	IBM Weather API
8.	Machine Learning Model	The neural network is being trained primarily to recognise sign languages.	Sign Recognition Model
9.	Infrastructure (Server / Cloud)	Implementing an application on a local system or setting up a local cloud server. Run the installer after installing the Windows version.	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open–source framework that is employed.	Flask, HTML,TensorFlow
2.	Security Implementations	Security and access control measure used, including firewalls.	Firewall and some security related softwares.
3.	Scalable Architecture	The data tier, the presentation tier, and the application tier are the three logical and physical computer tiers that make up the three-tier architecture, which is a well-known method of organising software applications.	3 – Tier Architecture.
4.	Availability	The system will be made global so that everyone can use it.	Conferencing technology
5.	Performance	Helps individuals with disabilities to access a world where their obstacles are acknowledged and taken into account.	NLP