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

Date	15 October 2022
Team ID	PNT2022TMID35953
Project Name	Project - A Gesture-based Tool for Sterile Browsing of Radiology Images
Maximum Marks	4 Marks

Technical Architecture:

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

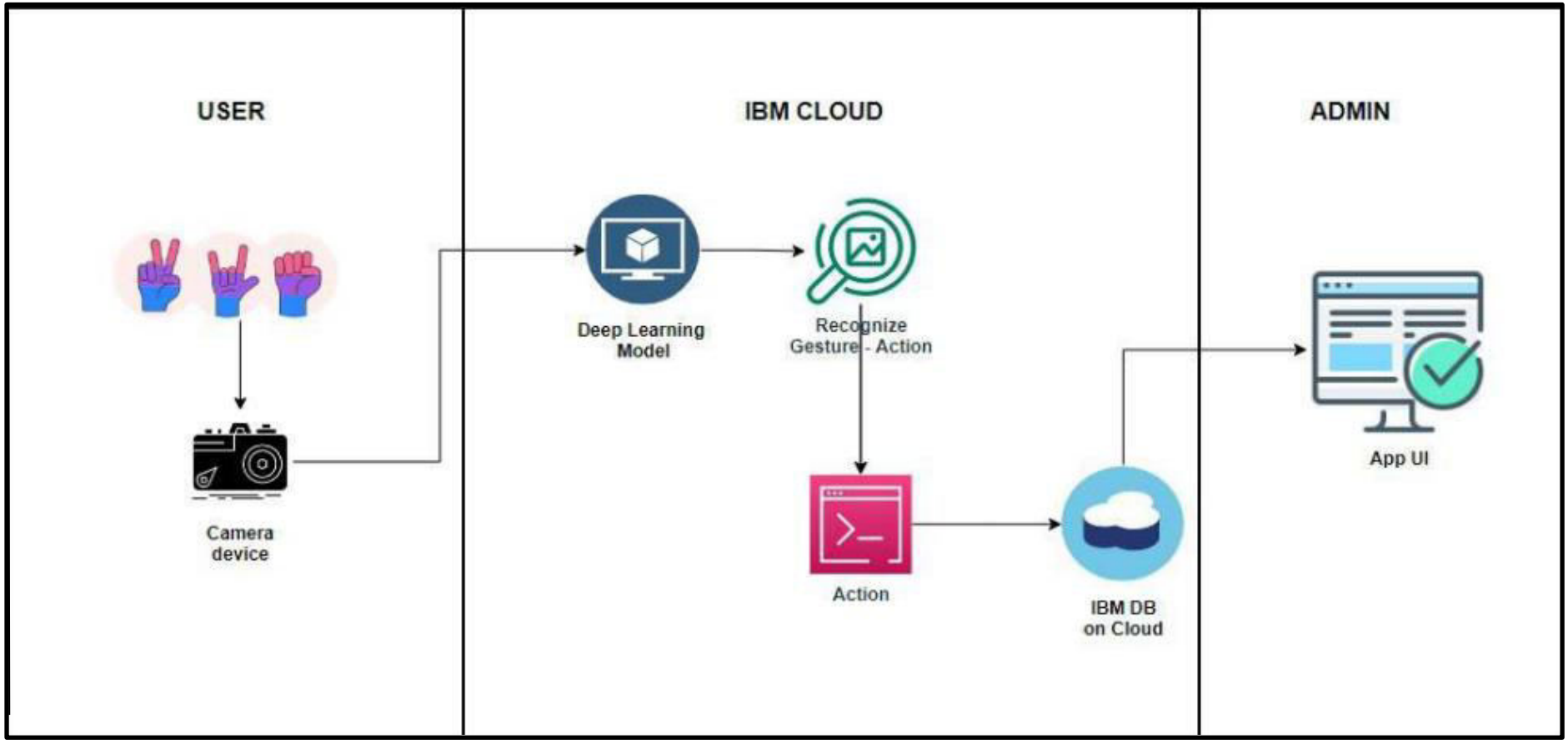

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	An application where users create a profile, capture images of the hand gestures for Sterile Browsing of Radiology Images.	HTML, CSS, JavaScript
2.	Image Capture	Users must capture the image(s) of the hand gestures which they used.	IBM Maximo Image Inspection
3.	Gesture Detection Model	The gestures used must be identified from the captured image.	Machine Learning & Image Processing using Python
4.	Recognition Gesture Action	The application keeps track of users hand gestures captured in a day.	IBM Push Notifications
5.	Database of Gestures	The data of Gestures and their corresponding actions are stored.	MySQL
6.	Cloud Database for Back-up	Data used by the application is stored here for back-up.	IBM Cloudant
7.	File Storage	Each users gestures are kept track using a file system.	IBM Block Storage
8.	External API	This helps to deploy an application.	IBM Watson
9.	Machine Learning Model	Captured images are processed using machine learning models to identify action need to be performed.	Object Recognition Model to Label Action
10.	Infrastructure (Server / Cloud)	The application is deployment on cloud for use Cloud Server.	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Google Colab, VS Code, Online Websites	Python, HTML, CSS, JavaScript
2.	Security Implementations	Authenticating using Unique ID	Firebase
3.	Scalable Architecture	Application is revised based on user experience and feedback including updates, bug fixes, and inclusion of new features	Customer feedback, reviews, and ratings
4.	Availability	Users should be able to access the application that is hosted on the cloud at all times and should not face any issues such as application crash	IBM Cloud
5.	Performance	Application should handle large number of requests and should not compromise on quality of results and time taken	Testing - Black, White, and Beta Revise application in spiral model