Project Design Phase-II
Technology Stack (Architecture & Stack)
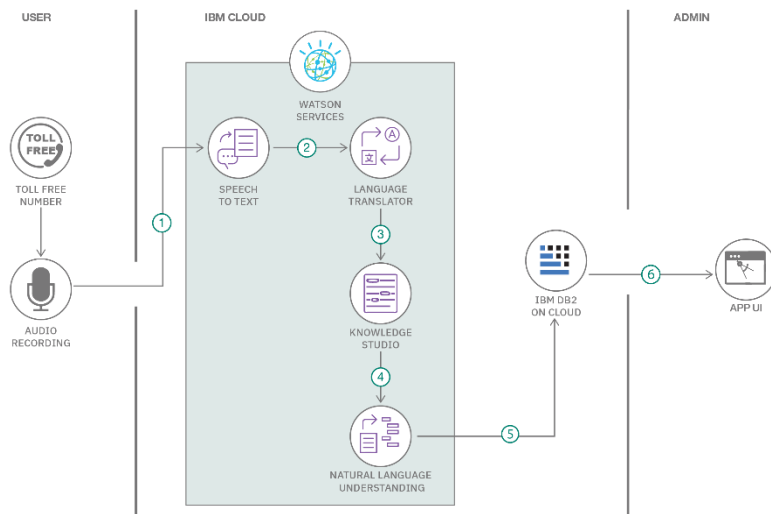
Date	03 October 2022
Team ID	PNT2022TMID00640
Project Name	Project – Virtual Eye – Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

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	User interacts with application e.g. Web UI	HTML, CSS, JavaScript, PHP
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM Cloudant
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	IBM Weather API
9.	External API-2	Purpose of External API used in the application	Aadhar API
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	YOLO Model
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Active monitoring through IBM Cloudant Database

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Poseidon
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	SwimEye, Angel Eye, CamerEye
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	MOBOTIX IoT Cameras

References:

https://c4model.com/

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