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

Date	10/11/2022
Team ID	PNT2022TMID02859
Project Name	Containment zone alerting application
Maximum Marks	4 Marks

Technical Architecture:

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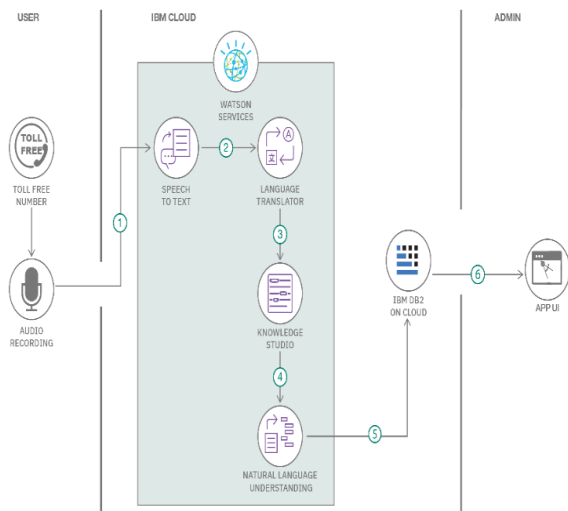
Guidelines:

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	How user interacts with application	HTML, CSS JavaScript / React JS etc.
2.	Developing Interface	Developing application for the task	Python
3.	Geofencing	Location based service in which an app or other software program uses radio frequency identification	Tile38, Geo (JavaScript by Amazon Location Service (ALS)
4.	Alert Notifications	Broadcast of messages to user based on their location	SendGrid
5.	Database	Data related to user, location and containment zones are to be stored	MySQL
6.	Cloud Database	Database service on cloud for user information is stored	IBM DB2, IBM Cloudant etc
7.	File Storage	File storage requirements	IBM Block storage or other Storage Service or Local Filesystem
8.	Infrastructure (Server/Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud server Configuration:	Local, Cloud Foundry, Kubernetes, etc.

Table – 2: Application Characteristics:

S.No	Component	Description	Technology
1.	Open-Source Frameworks	Frameworks used for application development.	Flutter, React, Android studio
2.	Security Implementations	Using of python flask to cloud connect will provide security to the project. Database will be safely stored in DB2.	IBM DB2 and Flask
3.	Scalable Architecture	Increasing the storage space of database can increase the number of users.	IBM DB and Cloud
4.	Availability	The Application will be available to all users with in the network range.	RAID (Redundant array of independent disks)
5.	Performance	Focus on loading the application as quickly as possible irrespective of the number of user / integrator traffic.	DRAM or Flash memory