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

Date	23 October 2022
Team ID	PNT2022TMID39426
Project Name	Project – Hazardous Area Monitoring For Industrial Plant Powered By IoT
Maximum Marks	4 Marks

Technical Architecture:

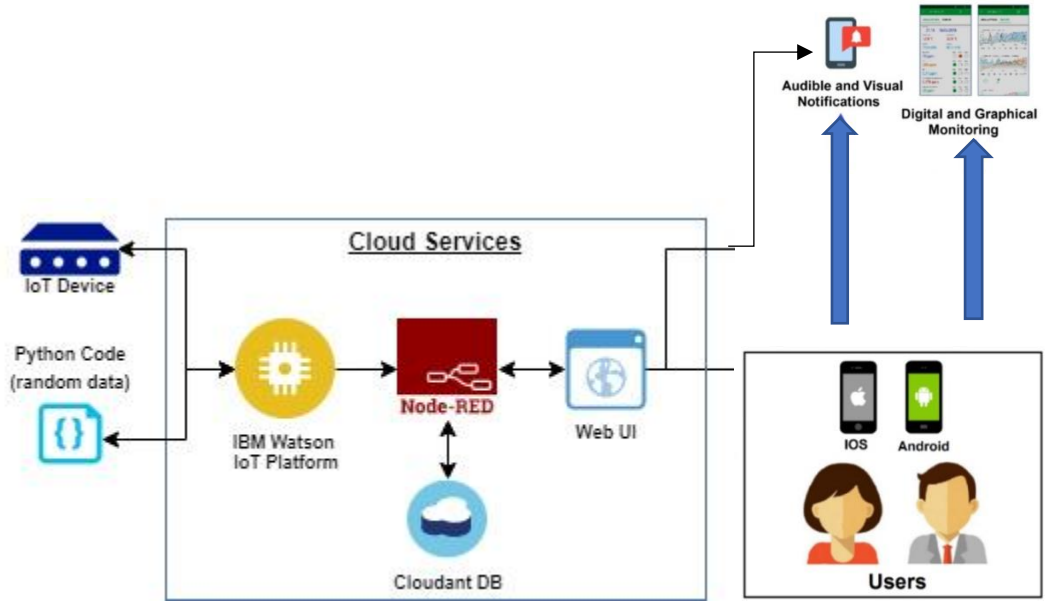

Table-1 : Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g., Mobile App.	HTML, JavaScript
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, NoSQL
6.	Cloud Database	Database Service on Cloud	IBM Cloud ant
7.	File Storage	File storage requirements	IBM Block Storage.

8.	External API-1	Purpose of External API used in the application	IBM Watson API.
9.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration	Local, Cloud Foundry.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	n industrial areas fire accidents can prevent by fire detection using temperature, gas and flame sensors with automatic water sprinkler, Harmful or toxic gas leakages can identify by monitoring harmful gases and intimate alert message to safety control board of industry, Machine overheating can reduce by cooling machine with compressor, control the humidity and temperature instantaneously in order to have stable, controllable atmospheric conditions.	Arduino, nodered
2.	Security Implementations	By using continuous monitoring and detecting of hazardous signs, major problems will be prevented at the initial stages.	IBM cloud
3.	Scalable Architecture	This mechanism is feasible because it is easy to setup, user friendly, wireless detector, predicts the risk, in beforehand, affordable	Using affordable and reliable sensors (IoT technology).
4.	Availability	This mechanism is feasible and it is easy to set up. Trust worthy and easy to access in many fields.	Amazon Web services, Cloud platforms.
5.	Performance	When problem occurs, the investigations based on the problems found there will be more possibilities to make the ideas in to applicable..	Machine learning and analytics.