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

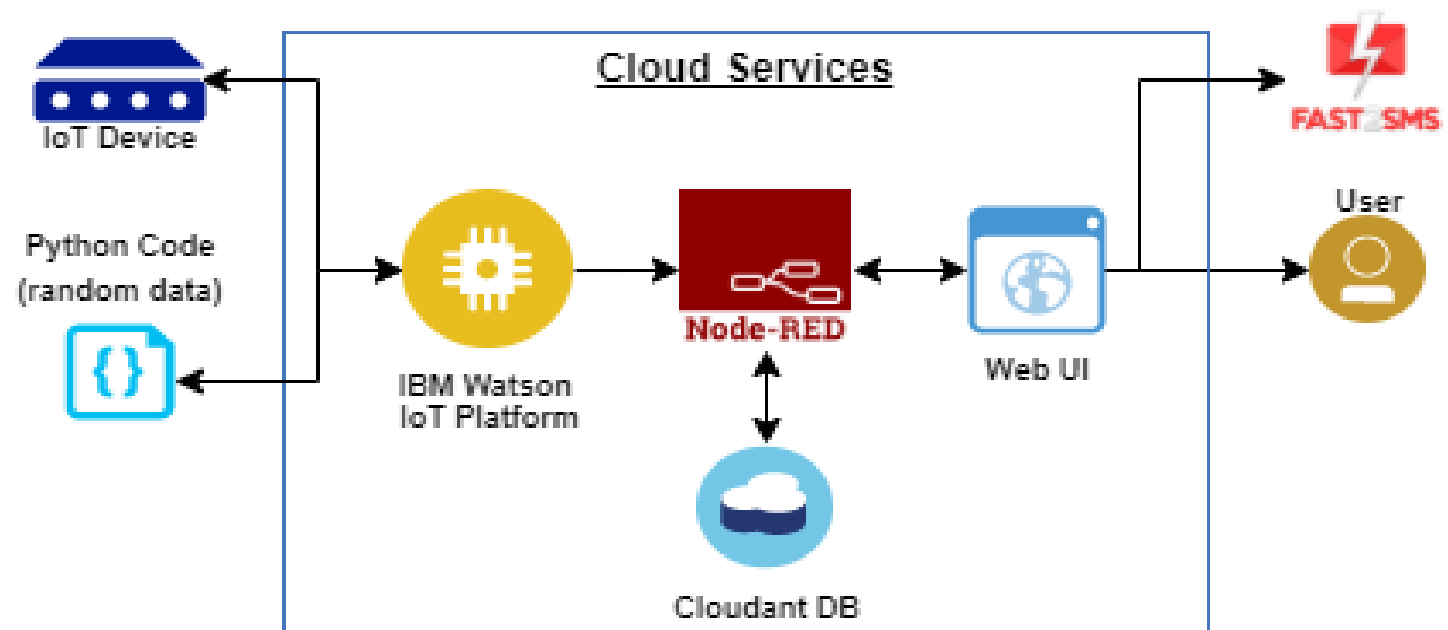| Date	03 October 2022
Team ID	PNT2022TMID35923
Project Name	Hazardous area monitoring for industrial plant powered by IOT
Maximum Marks	4 Marks

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile App, Chatbot, cloud, sms alert etc	Python Script etc.
2.	Application Logic-1	Data processing, data segmentation	cloudant
3.	Application Logic-2	Node-red, sensors	IBM Watson STT service
4.	Application Logic-3	Web application-user interface	IBM Watson Assistant
5.	Cloud Database	Database Service on Cloud	IBM Cloudant etc.
6.	File Storage	File storage requirements	IBM Block Storage
7.	External API-1	Random data	Cloudant, IBM Weather etc
8.	Machine Learning Model	Monitoring the area	Beacon scanner
9.	Infrastructure (Server / Cloud)	Application Deployment on Local	Local, Cloud Foundry, etc

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Cloudant, SMS alerts	Python
2.	Security Implementations	Implementation of authentication	Sensor data, beacon device scanner
3.	Scalable Architecture	Micro-services	Web UI, cloud, sms
4.	Availability	Data from sensors is collected to cloud	Sensors, beacon scanner
5.	Performance	High performance, reliable, high accuracy ,secure device	Wearable device