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

Date	15 October 2022
Team ID	PNT2022TMID49709
Project Name	GAS LEAKAGE MONITERING AND ALERTING SYSTEM
Maximum Marks	4 Marks

Technical Architecture:

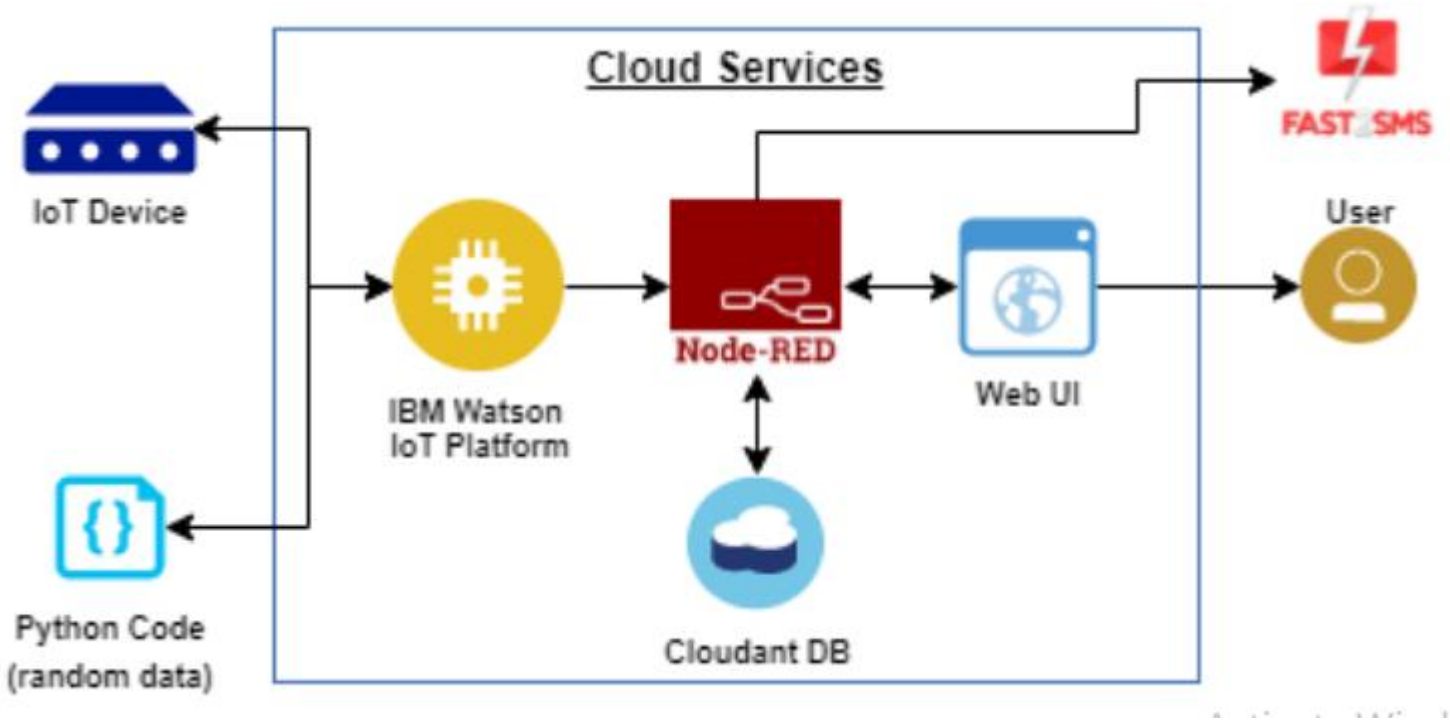

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile App	IOT Platform
2.	Application Logic-1	Mobile App to identify the Gas leak	Python
3.	Application Logic-2	Gets the location of the leakage data from database	IBM Watson IoT API Call data
4.	Application Logic-3	Converts the Data into a text Notification and alert	IBM Watson Assistant
5.	Database	Incident location and kind of leakage	MySQL
6.	Cloud Database	Call the data IBM Cloud is used and userlogin credentials	IBM DB2, IBM Cloudant
7.	File Storage	App code and IoT credentials are stored and APIkeys	IBM Block Storage
8.	External API-1	To get the status of location of gas leak	IBM box status API
9.	External API-2	To get the login credentials in IBM DB2	Username and Password API
10.	Machine Learning Model	To convert the Gas leak location and to alert for averting Incident	Notification alert
11.	**Infrastructure (Server / Cloud)**	**To host the server and application**	**Cloud Foundry, Node Red**

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	To develop the application interface, we use **IOT Device**	**IOT Device**
2.	Security Implementations	To secure the users login credentials and personal information	**IBM Watson IOT platform**
3.	Scalable Architecture	To scale the application database	**IBM Auto scaling**
4.	Availability	To make use the application and data are available 24/7	**IBM Cloud load balancer**
5.	**Performance**	**To increase the performance the application in hosted in the high-performance instance**	**IBM instance**