PROJECT DESIGN PHASE II
Technology Stack (Architecture & Stack)

DATE	27-10-2022
TEAMID	PNT2022TMID34030
PROJECT NAME	Smart Waste Management System For Metropolitan Cities
MAXIMUM MARK	4 Marks

ARCHITECTURE:

The deliverable shall include the architectural diagram below and the information as per the table1 & table2
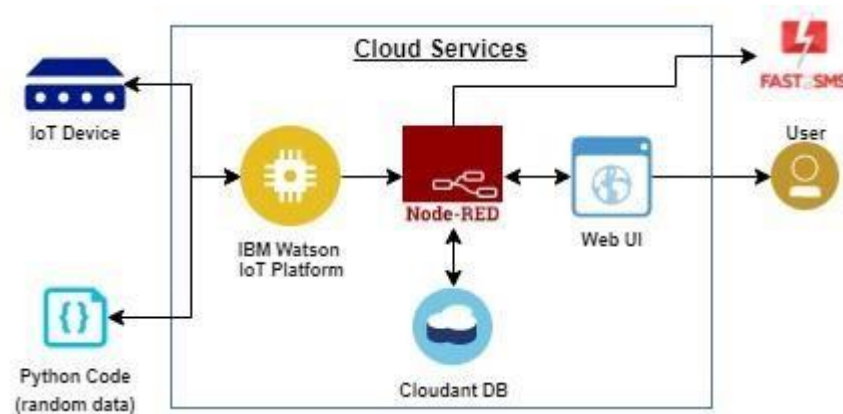
GUIDELINES:

*This project helps the industries in monitoring the emission of harmful gases
*In Several areas, the gas sensors will be integrated to monitor the gas leakage
*If in any area gas leakage is detected the admins will be notified along with the location
*In the web application admin can view the sensor parameters

DESCRIPTION:

Gas leakage leads to various accidents resulting in both material loss and human injuries. The risk of explosion, firing, suffocation are based on their physical properties such as toxicity, flammability etc.

To over come this we are using this method in this the sensors detect the gas leakage and send it to the node-RED.

The node-RED sends the fast SMS to the user.

TABLE-1:

COMPONENTS & TECHNOLOGIES

S. N0	COMPONENTS	DESCRIPTION	TECHNOLOGY
1	User Interface	How the user interacts with the application e.g., Web UI, Mobile App.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2	Application Logic-1	The logic for a process in the application.	Python
3	Application Logic-2	The logic for a process in the application.	IBM Watson IoT service.
4	Application logic-3	The logic for a process in the application.	IBM Watson Assistant.

5	Database	Data type, configurations, etc.	MySQL, NoSQL, etc.
6	Cloud Database	Database service on the cloud.	IBM cloud.
7	File Storage	File storage requirements.	IBM block storage or other storage service or local filesystem
8	External API-1	Purpose of external API used in the application.	IBM weather API, etc.
9	Machine Learning Model	Purpose of Machine Learning Model.	Object Recognition Model, etc.
10	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	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1	Open-Source Frameworks	List the open-source frameworks used.	The technology of the Opensource framework.
2	Security Implementations	Sensitive and private data must be protected from their production until the decision making and storage stages.	e.g., Node-Red, Open weather App API, MIT App Inventor, etc
3	Scalable Architecture	scalability is a major concern for IoT platforms. It has been shown that different architectural choices of IoT platforms affect system scalability and that automatic realtime decision-making is feasible in an environment composed of dozens of thousand.	Technology used.
4	Availability	Automatic adjustment of farming equipment is made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc.	Technology used.

5	Performance	The idea of implementing sensors with gas leakage will be more efficient for monitoring	Technology used.