Project Design Phase-II

Technology Stack

Date	15 October 2022
Team ID	PNT2022TMID19483
Project Name	Project – Industry-Specific intelligent fire management system
Maximum Marks	4 Marks

Technical Architecture:

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

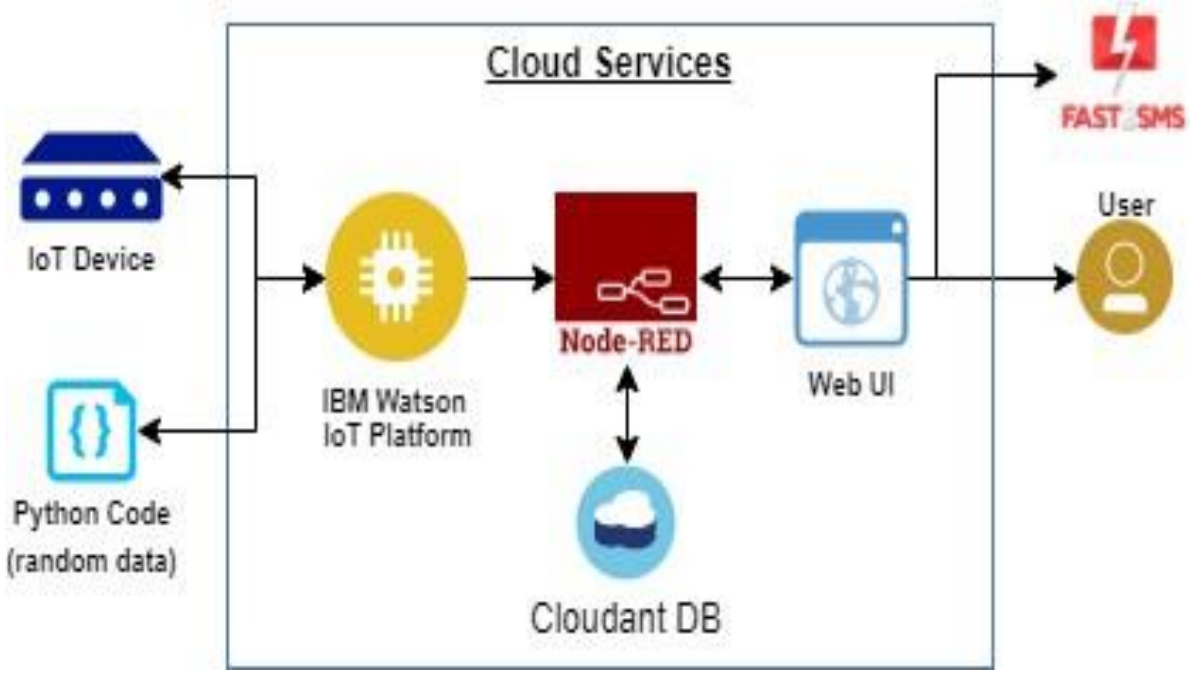

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Node-RED,	IBM IoT Platform, IBM Node red, IBM Cloud
2.	Application Logic-1	Create IBM Watson IOT platform and create node- red service	IBM Watson, IBM cloudant service,ibm node-red
3.	Application Logic-2	Develop python script to publish and subscribe to IBM IOT Platform	Python
4.	Application Logic-3	Build a web application using node-red service	IBM Node-red
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant
7.	File Storage	Developing mobile application to store and receive the sensors information and to react accordingly	Web UI,python
8.	External API-1	Using this IBM fire management API we can track the temperature of the incident place and where the fire had been attacked.	IBM fire management API
9.	External API-2	Using this IBM Sensors it detects the fire, gas leaks , temperature and provides the activation of sprinklers to web UI	IBM Sensors
10.	Machine Learning Model	Using this we can derive the object recognition model	Object Recognition Model

11.	Infrastructure	Application Deployment on Local System / Cloud Cloud Server Configuration	IBM cloudant, IBM IOT Platform

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Node Red Services	JavaScript
2.	Security Implementations	IBM Services	Encryptions, IBM Controls
3.	Scalable Architecture	Sensor-IOT Cloud based architecture	Cloud computing and AI
4.	Availability	Mobile, laptop, desktop	Node Red
5.	Performance	Detects the Fire, Gas leak, temperature	Sensors