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

Date	20 October 2022
Team ID	PNT2022TMID35457
Project Name	Industry-specific intelligent fire management system
Maximum Marks	4 Marks

Technical Architecture:

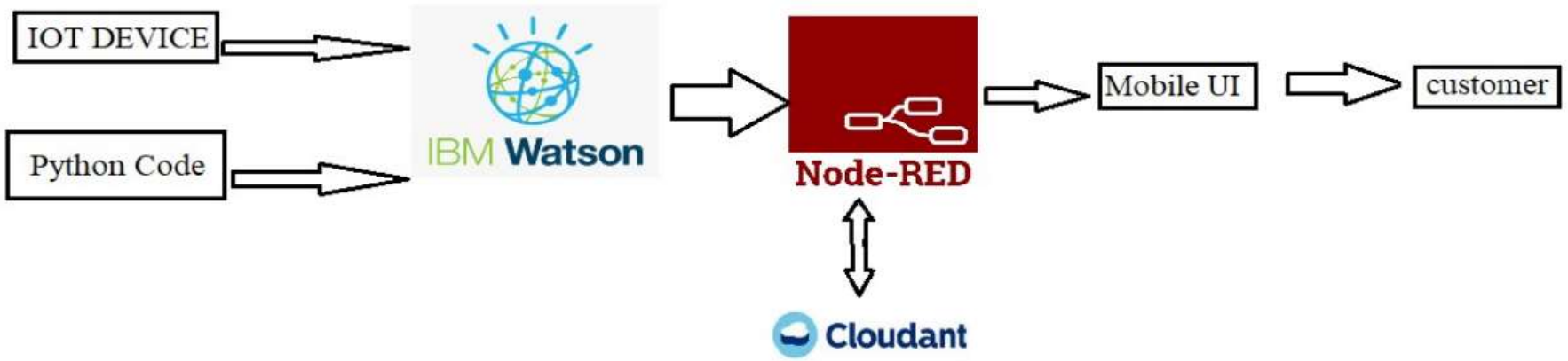

Table-1 : Components & Technologies:

1.	User Interface	Web UI, Node-RED, MIT app Inventor.	IBM IoT Platform, IBM Node RED, IBM Cloud, MIT app Inventor.
2.	Application Logic-1	Create IBM Watson IoT Platform and create Node RED service.	IBM IoT Platform, IBM Node RED, IBM Cloud.
3.	Application Logic-2	Create a mobile GUI, design Node RED for connecting DB with GUI	MIT app Inventor, IBM Node RED.
4.	Application Logic-3	Develop python script to subscribe publish and to IBM IoT Platform	Python
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant
7.	File Storage	Mobile application is developed for storing and receiving the sensor information.	MIT app Inventor
8.	External API-1	Sensors are used to detect the fire, temperature, smoke in the environment and p activates sprinklers.	Sensors
9.	External API-2	Fire management API is used to detect the fire and indicate.	Fire Management API
10.	Infrastructure (Server / Cloud)	Cloud Server Configuration	IBM cloudant, IBM Watson IOT

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	MIT app Inventor	MIT license
2.	Security Implementations	IBM Services.	Encryption and IBM Controls
3.	Scalable Architecture	Sensor-IoT Cloud based Architecture	Cloud Computing
4.	Availability	Mobile phones	MIT app Inventor
5.	Performance	Good performance sensors and boards	Sensor