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

Date	21 October 2022
Team ID	PNT2022TMID18102
Project Name	Hazardous Area Monitoring For Industrial Plant Powered By IOT.
Maximum Marks	4 Marks

Technical Architecture:

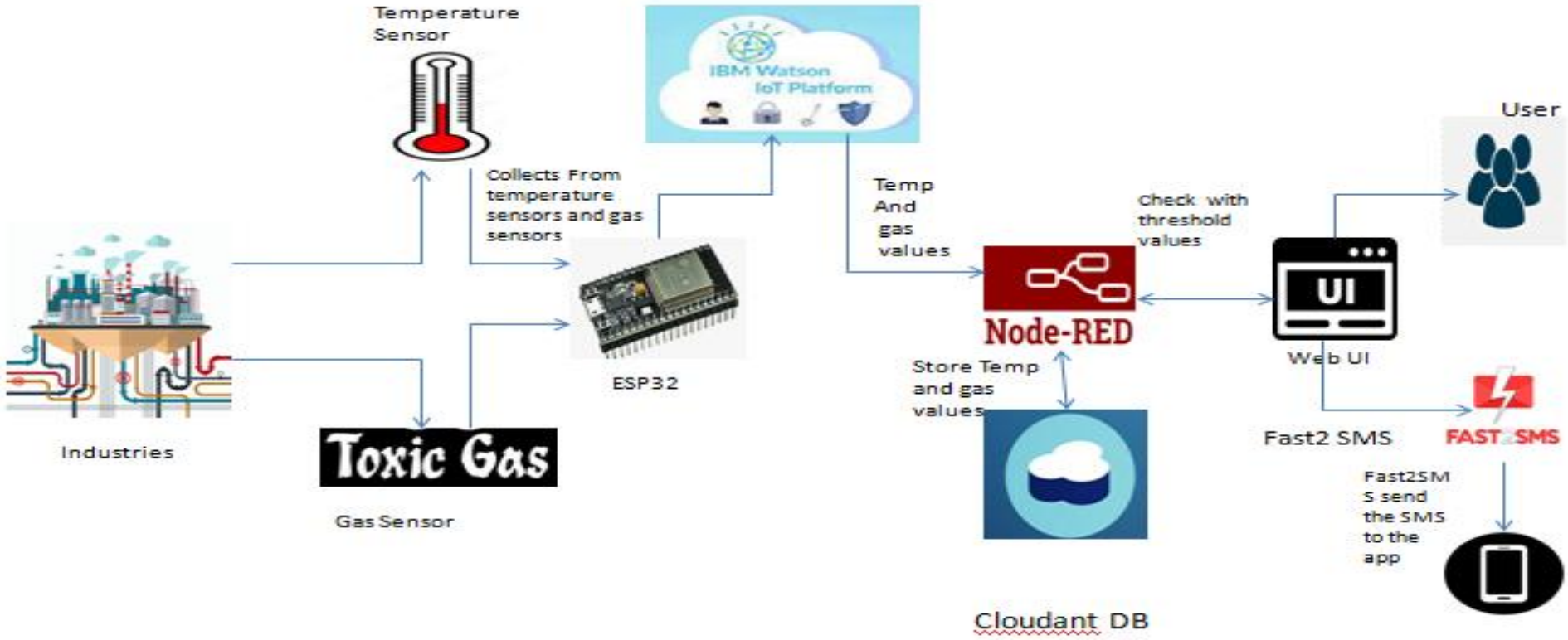

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile App/Web UI, SMS service	MIT App Inventor,Fast2SMS,
2.	Application Logic-1	Getting data from the Sensors interfacing with arduino/ESP32	C/C++
3.	Application Logic-2	Collected data send to the cloud services,store the data and check the data with threshold value	Node Red,IBM Watson IOT platform, Cloudant DB
4.	Application Logic-3	The data display to the user and send the alert message to the user and admin	Web UI,Mobile App, Fast2SMS
5.	Cloud Database	Database Service on Cloud	IBM Cloudant DB
6.	External API-1	To send the SMS to the user.	Fast2SMS.
7.	Nodes	For collecting the data from the industrial environment.	Gas and Temperature Sensors, Microcontroller.
8.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Node Red open source is used to connect the web UI and IBM Watson IOT platform	NODE-RED
2.	Scalable Architecture	We can store the data come out from different hazardous areas this area may be increased or reduced according to the situations.	Cloudant DB.
3.	Availability	The web UI/Mobile app is available at anywhere. It is used by anyone.	MIT app inventor.
4.	Performance	By Providing the login credentials to the user and user's family the security performance of the application is high.	Cloudant DB,MIT app inventor.