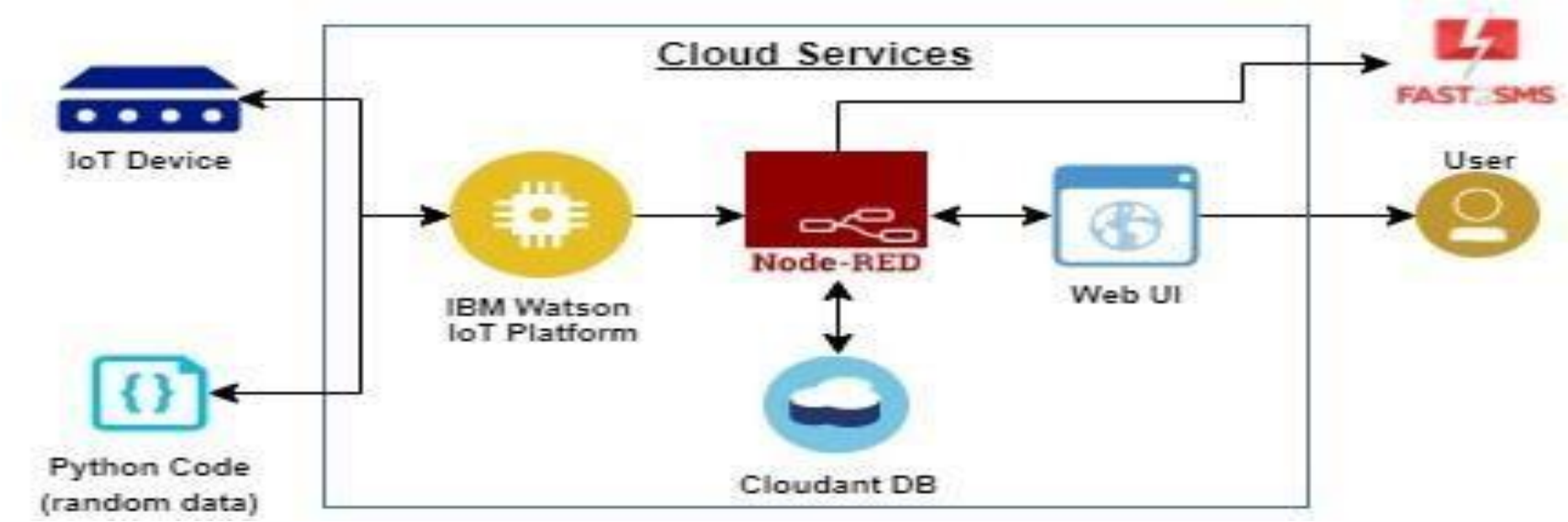
Project Design Phase-II Technical Architecture

Date	15 October 2022
Team ID	PNT2022TMID39619
Project Name	Project - Gas leakage monitoring and alerting system for industries
Maximum Marks	4 Marks

Technical Architecture



S.No	Characteristics	Description	Technology
1.	Open-Source Framework	Opensource frameworks for connecting to raspberry pi and node red	Working with Raspberry PI Wiring Pi, Pigpio, Gpiozero, Rpi. GPIO
2.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Data , models, operate at size, speed , consistency and complexity
3.	Availability	The availability of application (e.g. use of load balancers, distributed servers etc.)	Numerous area leakage detection.
4.	Performance	Design aspects for the performance of the application (number of requests per second, use sensors) etc.	Full and effective detection using Raspberry pi for Industries.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI or Website	HTML, CSS.
2.	Application Logic-1	Sensor initialization	Node RED
3.	Leakage detector	To detect the leakage of gas in the industries in case of arrangement	Non-dispersive infrared sensors, or NDIR

4.	Infrastructure (Server / Cloud)	Application deployed on cloud server	IBM Watson IoT Platform

Table-2: Application Characteristics: