Prerequisites

Date	17th November 2022
Team ID	PNT2022TMID23719
Project Name	Gas Leakage Monitoring and Alerting System for Industries
Maximum Mark	4 marks

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Basic knowledge of the following cloud services:

- IBM Watson IoT Platform
- Node-RED Service

IBM Watson IoT Platform:

IBM Watson IoT Platform connects devices, ingests device data and transforms that data into meaningful insights. Watson IoT Platform and its additional add on services enable Clients to capture data for devices, equipment, and machines, to explore this data, and to discover insights on this data that drive better decision making. Watson IoT Platform provides a pre-integrated foundation for industry solution and Client applications built on IoT data. IBM Watson IoT Platform is made up of three fundamental services:

Connection Service, Analytics Service, and Block chain Service. All three services have a nonproduction package for proofs of concept and pilot work, aswell as a production package for full production deployment.

IBM Watson IoT Platform Connection Service capabilities include:

- Connection of a wide spectrum of IoT devices

- IoT device registration and management

- User Registration, setup, and authentication

- Ability to create alerts

- Security with TLS authentication support, access control group fordevices &gateways

- Data Lifecycle Management

- Solution administration for deployment and device groupings Additionally:

- Analytics Service enable to enrich, augment and interact with raw data

- Block chain Service enable to connect with Block chain enabled networks.

Node-RED Service :

Node-RED is a flow based development tool for visual programming developed originally by IBM for wiring together hardware devices, APIs and online services as part of the Internet of Things. Node-RED provides web browser - based flow editor, which can be used to create JavaScript functions. Elements of applicationscan be saved or shared for re-use. The runtime is built on Node.js. The flows created in Node-RED are stored using JSON. Since version 0.14, MQTT nodes can make properly configured TLS connections.