

# Project Objectives

**Team ID** : PNT2022TMID14465

**Project name** : Gas Leakage monitoring & Alerting system for Industries

PNT2022TMID14913

**By the end of this project we will:**

- Gain knowledge of Watson IoT Platform.
- Connecting IoT devices to the Watson IoT platform and exchanging the sensor data.
- Gain knowledge on IBM Cloudant DB
- Explore Python client libraries of Watson IoT Platform.
- Explore Python library for integrating OpenCV for accessing the Live Camera Input
- Scan the QR code in live streaming and retrieve the QR code details
- Gain knowledge of web application development.
- Gain knowledge of storing the data in Cloudant DB
- Generating QR codes with the required data.

**Project Flow:**

- The parameters like hazardous gas levels, fire, humidity, and temperature data are published to the Watson IoT platform.
- The device will subscribe to the commands from the application and take decisions accordingly to switch on the rainwater sprinkler in case of emergencies
- Sensor data is visualized in the Web Application.

**To accomplish this, we have to complete all the activities and tasks listed below:**

- Create and configure IBM Cloud Services
  - Create IBM Watson IoT Platform and Device
  - Create Node-RED service
- Develop the Python Script
  - Develop the Python Script
- Develop a web Application using Node-RED Service.
  - Develop the Web application using Node-RED
  - Testing the Web UI by giving the required inputs