PROJECT OBJECTIVES

PROJECT TITLE: GAS LEAKAGE MONITORING AND ALERTING SYSTEM

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By the end of this Project:

- 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