Project Design Phase-I
Solution Architecture

Date	5 October 2022
Team ID	PNT2022TMID22887
Project Name	Gas Leakage monitoring & Alerting system
Maximum Marks	4 Marks

Solution Architecture:

The system can be taken as a small attempt in connecting the existing primary gas detection methods to a mobile platform integrated with IoT platforms. The gases are sensed in an area of 1m radius of the rover and the sensor output datas are continuously transferred to the local server. The accuracy of MQ sensors are not upto the mark thus stray gases are also detected which creates an amount of error in the outputs of the sensors, especially in case of Gas.

 Further the availability and storage of toxic gases like hydrogen sulphide also creates problems for testing the assembled hardware. As the system operates outside the pipeline, the complication of system maintenance and material selection of the system in case of corrosive gases is reduced. Thus the system at this stage can only be used as a primary indicator of leakage inside a plant.

Block Diagram:
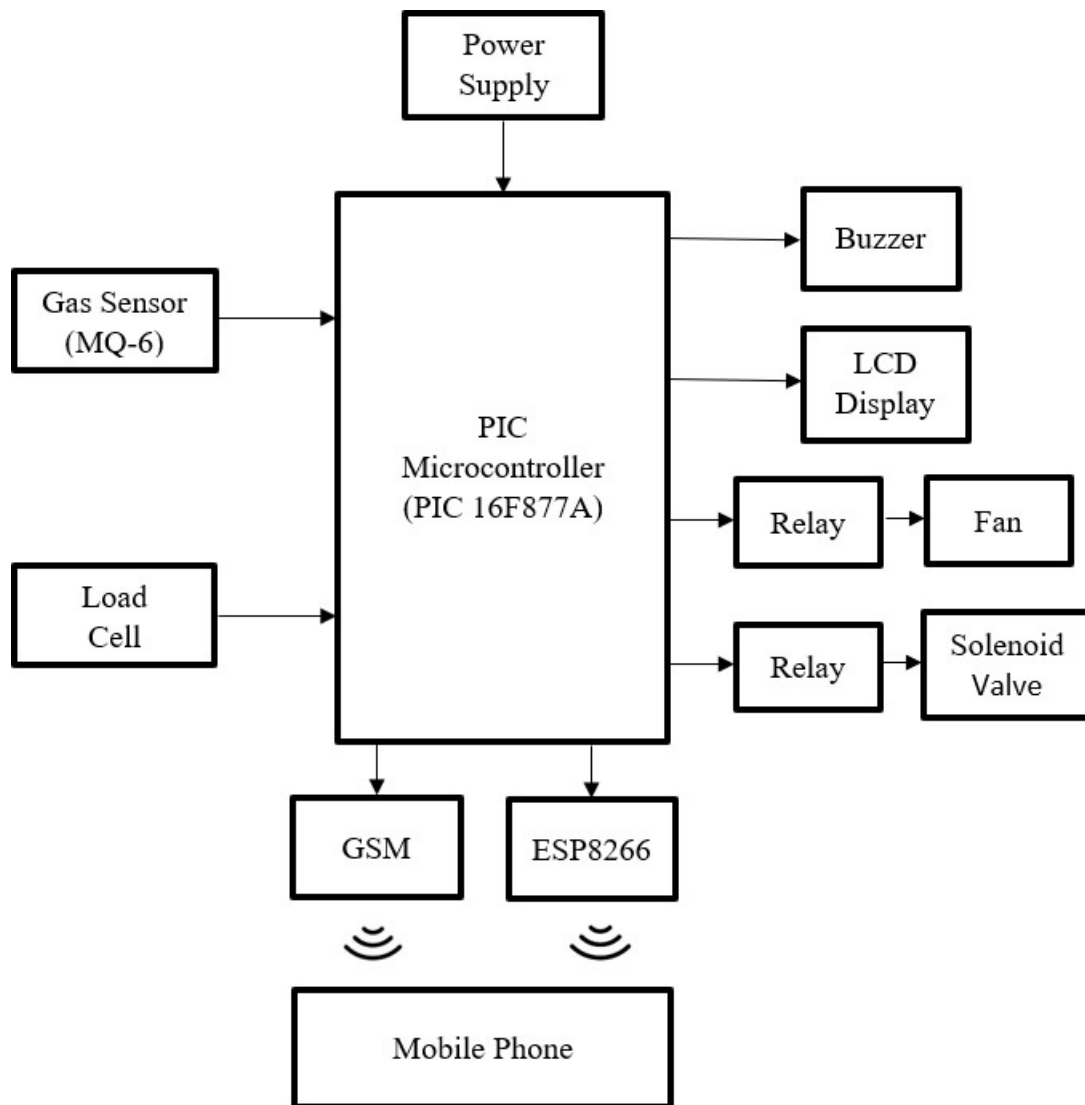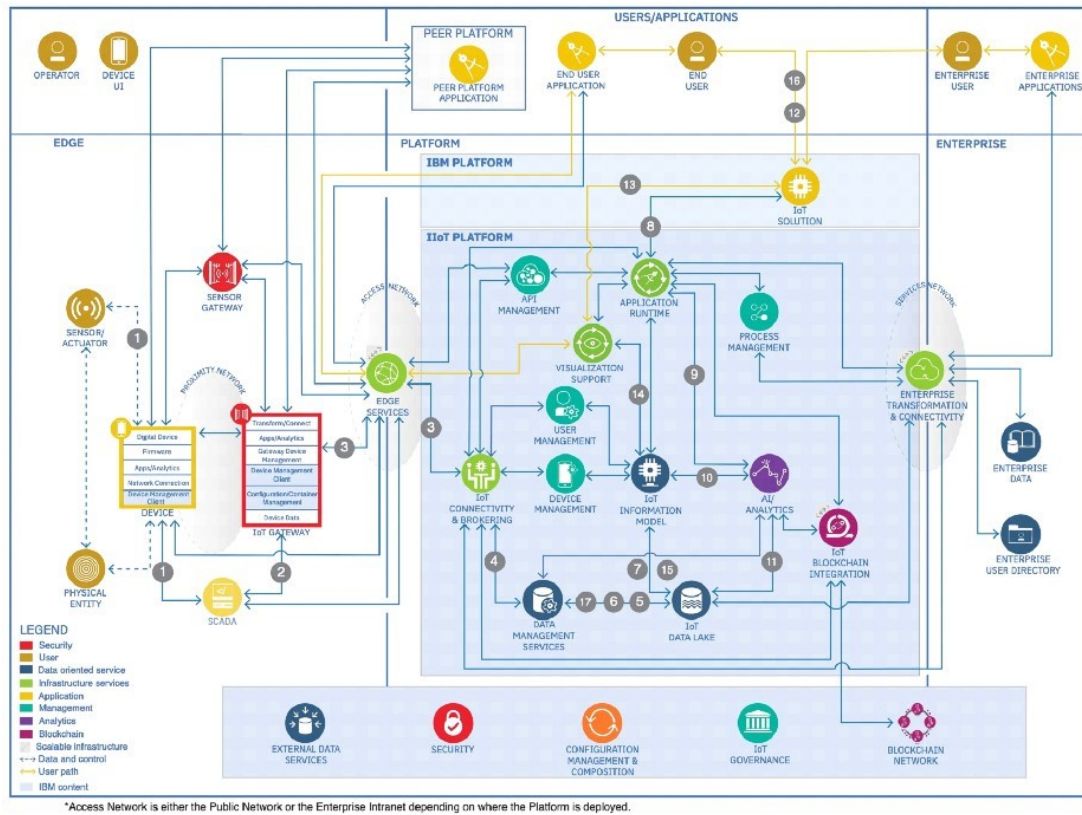
Solution Architecture Diagram:

Figure 1: Architecture and data flow of the gas leakage monitoring and alerting system.