# Project Design Phase-II

**Data Flow Diagram & User Stories**

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| **Date** | 27 October 2022 |
| **Team ID** | PNT2022TMID33933 |
| **Project Name** | Gas Leakage Monitoring And Alerting System In Industries |
| **Maximum Marks** | 4 Marks |

## Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enter and leaves the system, what changes the information, and where data is stored.

## User Stories

Use the below template to list all the user stories for the product.

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| **User Type** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Acceptance criteria** | **Priority** | **Release** |
| Worker in industry | Gas detection design coverage | USN-1 | Area Coverage for Gas Detectors Like smoke detectors, a gas detector is capable of providing up to 75SQM area coverage based on a 5M radius of operation. | Design coverage measures the percentage of test cases coverage against the number of requirements | High | Sprint-1 |
| Owner in industry | Leak detection | USN-2 | In industrial settings leak detection is a routine  procedure that is necessary for monitoring product movement. | To detect leaks in fluid  system such as piping network and pressure vessels | High | Sprint-1 |
| Owner in industry | Gas detection actions | USN-3 | A gas detection system is usually connected with an alarm system, so as soon as the potentially dangerous gas is detected, the alarm is set to ON automatically, which warns the  workers in time to safely evacuate. | Gas detection systems are used to monitor and either alarm or be part of processing control | Low | Sprint-2 |
| Worker in industry | Gas detection location | USN-4 | A gas detection sensors should be located near the floor for gases or vapors three or four times heavier than air. They should be installed near the ceiling orroof to detect lighter-than-airgases. | To detect install your natural gas detectors in locations close to sources of natural gas. | Medium | Sprint-1 |
| Worker in industry | Gas detection levels | USN-5 | A gas detection levels programmed, typically 10-20% LEL for a first alarm (warning) and 20-40% LEL for a second  stage alarm to evacuate or take further action | Gas detection level shows the percentage within a safety range of 0-10% of the Lower Explosive Limit (LEL) and,  ideally, should read 0% | High | Sprint-1 |
| Worker in industry | Gas detection calibration | USN-6 | A gas detection calibration must be traceable to a national or international standard in order to be considered accurate for calibration. | Calibration is recommended annually or if bump testing indicatesan  out of spec sensor | High | Sprint-1 |