**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

| Date | 03 October 2022 |
| --- | --- |
| Team ID | PNT2022TMID23535 |
| Project Name | Gas Leakage Monitoring and Alerting System |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| --- | --- | --- |
| FR-1 | Gas Concentration Levels | 1. Sensor network for data transfer 2. Current status of different gas levels in the pipelines 3. Periodic report on various gas present 4. Temperature , real time update about leakage |
| FR-2 | Identify Optimisation Strategies | 1. Amount of gas pollutants per sq meter of air 2. Expected time of gas leakage by detecting the increase in gas concentration level in air |
| FR-3 | Operational Efficiency | 1. Periodic monitoring of workers health status 2. Sensor network for data transfer |
| FR-4 | Quick Decision Making | 1. Send notification in case of sudden increase in gas levels 2. Detect and notify the exact location of gas leakage |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

| **FR No.** | **Non-Functional Requirement** | **Description** |
| --- | --- | --- |
| NFR-1 | **Usability** | Multilingual and User-friendly application for customers |
| NFR-2 | **Security** | The system data is kept secure, store data and responds to attack with help of Transport layer Security Protocol |
| NFR-3 | **Reliability** | Improved responsive time and remote real-time monitoring |
| NFR-4 | **Performance** | The system provides better speed and efficiency irrespective of the workload |
| NFR-5 | **Availability** | Leak detectors are easy -to -use and easy-to-operate cloud based software system to monitor leakage |
| NFR-6 | **Scalability** | The system can respond to change in demand |