**Project Design Phase-II**

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

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID29999 |
| Project Name | Gas leakage Monitoring and alerting system for industry |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | The system gas leakage detects gas in the atmosphere and will be continuously update and display the gas value. the value can be seen by the user through the mobile app easily. |
| FR-2 | User Confirmation | The user after connecting the system to the internet send a message to the user saying that the system is activated and ready to perform |
| FR-3 | User Authentication | Normal webpage is shown to the user. It shows the sensor values stored in the database. It also displays the prediction to the user for the values external by him. |
| FR-4 | User processing | The user start the system by connecting to a hotspot or a wi-fi connection. |
| FR-5 | User Business goal | The internet of things is the system of gadgets, vehicles and home machine that contain hardware, programming, actuators, and network which enables these things to interface, collaborate and trade information |
| FR-6 | User Reporting | It decided whether the environment is safe or not and accordingly a message will be sent. |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The system interface should be easy and effective. |
| NFR-2 | **Security** | the communication between the Arduino and the GLDS should be secure by encryption. The system should not display the homeowner personal information to anyone. |
| NFR-3 | **Reliability** | The system should be operated in android reliable system. |
| NFR-4 | **Performance** | The system should response immediately to any leakage situation The system should update the local database in real time. |
| NFR-5 | **Availability** | The system should work 24 hours 7 days a week. |
| NFR-6 | **Scalability** | The gas detector should be from anywhere at any time. The homeowner information should be modified easily. |