Project Design Phase-II

Solution Requirements (Functional & Non-functional)

| Date | 13 October 2022 |
| --- | --- |
| Team ID | PNT2022TMID33893 |
| Project Name | Gas Leakage Monitoring and Alerting  System for Industries |
| 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 | User Registration | * Registration through authorized form * Registration through Gmail |
| FR-2 | User Confirmation | * Confirmation via Email * Confirmation via OTP |
| FR-3 | User SIGN IN | * User can sign in with username and password in authorized forms or email |
| FR-4 | Connect the NODEMCU device | * Via the WIFI we connect the NODEMCU device with the applications. |
| FR-5 | Update contact details | * contact details should be updated periodically. |
| FR-6 | REALTIME MONITORING | * Temperature and humidity level are represented graphically .   . |
| FR-6 | Output | * The user shall be able to receive the warning message as quickly as possible. * The user shall be able to view information of the fire station to reach them as soon as possible. |
| FR-7 | Review and Feedback | * This project was conducted to help home owners to have easy way to avoid the gas leakage incidents before they occur . * Provide feedback |

# Non-functional Requirements:

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

| **FR No.** | **Non-Functional Requirement** | **Description** |
| --- | --- | --- |
| NFR-1 | **Usability** | * The system interface should be easy and effective * The device can be accessed through WIFI. |
| NFR-2 | **Security** | * The connection between the Arduino and   the GLD should be secure by encryption.   * The system should not display the personal information of home owner to anyone. |
| NFR-3 | **Reliability** | * Prevent from accidents. * Avoid false Alarm. * It Should avoid the delay alert message. |

| NFR-4 | **Performance** | * The system should make decision within the few minutes . * The Arduino response time should be fast. * The should response immediately to any leakage situation. |
| --- | --- | --- |
| NFR-5 | **Availability** | * The system should work 24hours 7 days a week . * This model is used to continuously monitor and   display the gas level and check the gas level is exceed or not. |
| NFR-6 | **Scalability** | * Lot of users can access the application at the same time without any inconvenience. |