

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

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| Date | 18 October 2022 |
| Team ID | PNT2022TMID04581 |
| Project Name | Gas Leakage Monitoring & 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 | <ul style="list-style-type: none">➤ Registration through Form➤ Offline Registration |
| FR-2 | User Confirmation | <ul style="list-style-type: none">➤ Confirmation via Email➤ Confirmation via OTP |
| FR-3 | User Authentication | <ul style="list-style-type: none">➤ User verification through valid User ID and password. |
| FR-4 | User Access | <ul style="list-style-type: none">➤ Realtime Monitoring of Gas Leakage System, through web portal for Authorized Users. |
| FR-5 | User Alert | <ul style="list-style-type: none">➤ User receives an alert through SMS.➤ Turn on Alerting System in Industry. |
| FR-6 | Review and Feedback | <ul style="list-style-type: none">➤ Receive Feedback from Users. |

Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|---|
| NFR-1 | Usability | <ul style="list-style-type: none">➤ Easier Installation process, and Realtime Monitoring Service. |
| NFR-2 | Security | <ul style="list-style-type: none">➤ Data transmission and handling through secured protocols.➤ Data encryption & Cloud security. |
| NFR-3 | Reliability | <ul style="list-style-type: none">➤ Only authorised personnel have access to the system.➤ Assured Data Security and Information conciseness.➤ Longer Lifetime of Product/Service. |
| NFR-4 | Performance | <ul style="list-style-type: none">➤ High Accuracy of gas leakage detection in localized area.➤ Faster Response to Gas Leakage Detection (SMS alert, valve closing). |
| NFR-5 | Availability | <ul style="list-style-type: none">➤ The user can access the System 24/7.➤ Realtime monitoring system. |
| NFR-6 | Scalability | <ul style="list-style-type: none">➤ The system is scalable even in case of many gas sensors. Or in case of many supervisors. |