

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

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| Date | 12 Nov 2022 |
| Team ID | PNT2022TMID12116 |
| 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. |