

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

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| Date | 13 October 2022 |
| Team ID | PNT2022TMID15153 |
| Project Name | Project – Gas Leakage Monitoring and Alerting System for Industries |
| Maximum Marks | 4 Marks |

Functional Requirements:

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| NFR-1 | Usability | <input type="checkbox"/> In Industries, we use this device to avoid the fire accidents. <input type="checkbox"/> The device can be accessed through Wifi. |
| NFR-2 | Security | Only authorised person can access the important details. |

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| NFR-3 | Reliability | <input type="checkbox"/> Prevent from accidents. <input type="checkbox"/> Avoid false Alarm. <input type="checkbox"/> It Should avoid the delay alert message. |
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Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| FR-1 | User Registration | <input type="checkbox"/> Registration through Form <input type="checkbox"/> Registration through Gmail |
| FR-2 | User Confirmation | <input type="checkbox"/> Confirmation via Email <input type="checkbox"/> Confirmation via OTP |
| FR-3 | User SIGN IN | <input type="checkbox"/> User can sign in with username and password |
| FR-4 | Connect the NODEMCU device | <input type="checkbox"/> Connect the NODEMCU device with application through Wifi. |
| FR-5 | Update contact details | <input type="checkbox"/> Update the emergency contact number. |
| FR-6 | REALTIME MONITORING | <input type="checkbox"/> It display the temperature level in pictorial representation using flow chart. |
| FR-6 | Output | <input type="checkbox"/> In Emergency situation, it sends alert message to emergency contact number. <input type="checkbox"/> It sends message to fire service. |
| FR-7 | Review and Feedback | <input type="checkbox"/> User can share their experience about the app usage. <input type="checkbox"/> Provide feedback |

Non-functional Requirements:

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

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| NFR-4 | Performance | In a gas usage industries, the gas is transferred from one end to another end through pipes at the time gas leakage is possible. We use this device to detect the gas leakage and gives buzzer alarm and send alert message to nearest police station and fire service department. |
| NFR-5 | Availability | 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. |