

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

Team ID	PNT2022TMID43096
Project Name	Gas Leakage Monitoring & Alerting System
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"><li>➤ Registration through Form</li><li>➤ Offline Registration</li></ul>
FR-2	User Confirmation	<ul style="list-style-type: none"><li>➤ Confirmation via Email</li><li>➤ Confirmation via OTP</li></ul>
FR-3	User Authentication	<ul style="list-style-type: none"><li>➤ User verification through valid User ID and password.</li></ul>
FR-4	User Access	<ul style="list-style-type: none"><li>➤ Real time Monitoring of Gas Leakage System, through web portal for Authorized Users.</li></ul>
FR-5	User Alert	<ul style="list-style-type: none"><li>➤ User receives an alert through SMS.</li><li>➤ Turn on Alerting System in Industry.</li></ul>
FR-6	Review and Feedback	<ul style="list-style-type: none"><li>➤ Receive Feedback from Users.</li></ul>

**Non-functional Requirements:**

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

NFR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	<ul style="list-style-type: none"><li>➤ Easier Installation process and easy to use</li></ul>
NFR-2	<b>Security</b>	<ul style="list-style-type: none"><li>➤ Data transmission and handling through secured protocols.</li><li>➤ Credential encryption &amp; Cloud security.</li></ul>
NFR-3	<b>Reliability</b>	<ul style="list-style-type: none"><li>➤ Only authorized personnel have access to the system.</li><li>➤ Assured Data Security and Information conciseness.</li><li>➤ Longer Lifetime of Product/Service.</li></ul>

NFR-4	<b>Performance</b>	<ul style="list-style-type: none"> <li>➤ High Accuracy of gas leakage detection in localized area.</li> <li>➤ Faster Response to Gas Leakage Detection (SMS alert, valve closing).</li> </ul>
NFR-5	<b>Availability</b>	<ul style="list-style-type: none"> <li>➤ The user can access the System 24/7.</li> <li>➤ Realtime monitoring system.</li> </ul>
NFR-6	<b>Scalability</b>	<ul style="list-style-type: none"> <li>➤ The system is scalable even in case of many gas sensors. Or in case of many supervisors.</li> </ul>