

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

Date	15 October 2022
Team ID	PNT2022TMID28615
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.	Non-Functional Requirement	Description
NFR-1	Usability	<ul style="list-style-type: none">❖ The system interface should be easy and effective❖ The device can be accessed through WIFI.
NFR-2	Security	<ul style="list-style-type: none">❖ 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	<ul style="list-style-type: none"> ❖ Prevent from accidents. ❖ Avoid false Alarm. ❖ It Should avoid the delay alert message.
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FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	<ul style="list-style-type: none"> ❖ Registration through authorized form ❖ Registration through Gmail
FR-2	User Confirmation	<ul style="list-style-type: none"> ❖ 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	<ul style="list-style-type: none"> ❖ 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	<ul style="list-style-type: none"> ❖ 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.

NFR-4	Performance	<ul style="list-style-type: none"> ❖ 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	<ul style="list-style-type: none"> ❖ 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.