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

Date	13 October 2022
Team ID	PNT2022TMID33893
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.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	❖ Registration through authorized form ❖ Registration through Gmail
FR-2	User Confirmation	❖ 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	❖ 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	❖ 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.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	❖ The system interface should be easy and effective ❖ The device can be accessed through WIFI.
NFR-2	**Security**	❖ 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**	❖ Prevent from accidents. ❖ Avoid false Alarm. ❖ It Should avoid the delay alert message.

NFR-4	**Performance**	❖ 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**	❖ 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.