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

Date	03 October 2022
Team ID	PNT2022TMID14029
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	**Objective**	To design and develop a Gas leakage monitoring & alert system. send an alarm notification on SMS and Email to any predefined mobile number and email respectively.
FR-2	**Focus**	To alert the user immediately if any gas leakage is sensed.
FR-3	**Features**	Gas leakage level will be indicated by the LED lights and buzzer. It detects the different harmful gasses like methane, LPG etc., by using the required sensors. It updates the sensor parameters in web applications.
FR-4	**Essentiality**	Gas may be leaked at various levels in various factories or homes, requiring additional gas sensors to detect it.
FR-5	**Gas leakage location sent**	A signal to the microcontroller will go to the display and show gas leakage messages there. The signal from Buzzer will signal when the first step is completed. Lastly, through GSM, there will be a signal message that the gas has been leaked to a specific number or multiple

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	This device is widely used in industry and can be found in home, factory ect.
NFR-2	**Security**	We use IOT technology for enhancing the existing safety standards. While Making this prototype has been to bring a revolution in the field of safety against the leakage of harmful and toxic gases in the environment and hence nullify any major or minor hazard being caused due to them.
NFR-3	**Reliability**	This device offers a complete, low cost, powerful and user-friendly way of real-time monitoring and remote control of gas leakages and prevention mechanisms in household and industrial areas.
NFR-4	**Availability**	The application can be accessed at any time and anywhere
NFR-5	**Scalability**	Application is not limited to the users