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

Date	15 October 2022
Team ID	PNT2022TMID06971
Project Name	Project – Hazardous Area Monitoring for Industrial Plant powered by IoT .
Maximum Marks	4 Marks

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	*Sensing the temperature of the particular area using temperature sensor. *Also detect the toxic gas using gas sensor.
NFR-2	**Security**	* Buzzer are used in industries to indicate and alert workers.
NFR-3	**Reliability**	*It helps to monitor the gas level regularly by which we can able to avoid explosions.

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Sensor	*MQ6 Sensor helps us to sense/detect gas leakage level. This sensor can detect gas concentrations from 200 to 10000ppm. *DHT11 sensor helps us to sense/detect Temperature. Measurement Range： Humidity 20-90%RH, Temperature 0~50℃
FR-2	LCD Display	*LCD Display continuously shows the reading of gas level And Temperature in the environment.
FR-3	Raspberry pi	* Collecting the sensor data and send to the cloud.
FR-4	Buzzer	*By fixing buzzers in industries we can able to alert the workers when there is a gas leakage is detected in their surroundings.

		*Buzzers are used to notify the workers in industries which helps to save many life before any accidents occurs.
NFR-5	**Performance**	*Actions are taken immediately after detection. *Alert notifications are send to the workers without any delay. *Helps to reduce accidents occurs by gas explosions and high temperature in industries.
NFR-6	**Availability**	*This device has MQ6 sensor that is highly sensitive to gas leakage and it helps us to know about the leakage without any delay.
NFR-7	**Scalability**	*instead of using DHT11 which gives a better performance and it does not require human help.