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

Date	06 October 2022
Team ID	PNT2022TMID34214
Project Name	GAS LEAKAGE MONITORING AND 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	Safety of production	Gas sensor, as one of the important devices to detects noxious gases, provide a vital way to monitor the concentration and environmental information of gas in order to guarantee the safety of production
FR-2	Real time monitoring.	The gas detectors can be used for the detection of combustible, flammable and poisonous gases and for loss of oxygen and also to detect a gas leak or other pollutants. The system proposed is planned, built and sent an SMS warning system for detection of gas leakages.
FR-3	Eliminate man power	This eliminates the man power, it monitor the system 24/7 and sends an immediate response by message if there is any leakage.
FR-4	Fast communication	If there was a leakge in the gas, the alerting systems the sensor sense the leakage sends an quick message to the user Performance

FR-5	Performance	Using IOT network the sensor sends an message to the user
FR-6	Scalable Architecture	Justify the scalability of architecture

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	IoT device verifies that usability is a special and important perspective to analyze user requirements, which can further improve the design quality. In the design process with user experience as the core, the analysis of users' product usability can indeed help designers better understand users' potential needs in gas leakage monitoring, behavior and experience.
NFR-2	**Security**	It helps to prevent from material loss and human injuries
NFR-3	**Reliability**	Gas leakage and monitoring helps to creating better working conditions for analysis, automatic restart and operation recovery
NFR-4	**Performance**	The sensors are used to detect the leakaging of the gas and sends a information to the node-RED and this sends a fast message to the user
NFR-5	A**v**a**il**a**bility**	By developing and deploying resilient hardware And beautiful software we empower business to manage leakaging

NFR-6	**Scalability**	Using alerting system we can reduce the explosion which leads to machine loss and human injuries and also we can able to monitor for 24/7