

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

Date	16 October 2022
Team ID	PNT2022TMID11539
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	User Registration	Registration through phone number.
FR-2	User Confirmation	Confirmation via phone number Confirmation via SMS
FR-3	Authentication	It can be provided through ONE TIME PASSWORD .
FR-4	Authorization level	Industrial managers,top level managers,workers and admins.
FR-5	Business Rules	Easily flame producing materials used be strictly prohibited in the workplace(lighters,matchbox)

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Arduino uses its own programming language which is similar to C++.However it is possible to use arduino with python or another high level programming language.Platform like arduino work well with python.
NFR-2	Security	Unauthorised access by other industrial people should be prevented.permissions only to the respective owners.
NFR-3	Reliability	Due to technology of sensor they will depeleted overtime and rapidly if exposed to the target gas.
NFR-4	Performance	Gas detectors measure or monitor that depletion of combustibile gases,toxic gases within an area as part of a safety system.This detectors typically sound an alarm and are deployed in confined spaces.
NFR-5	Availability	Old versions like alarm produces by sensors can be Updated using SMS .
NFR-6	Scalability	Industries to monitor leak of gas in each room from the control room. We can use temperature sensor, Multi Language Display, audio o/p to make it user friendly. However,

		<p>this application can also be developed in future by integrating more number of equipments to measure various parameters, for instance, a humidity sensor or an optical sensor to determine humidity.</p>
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