

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

Date	15 October 2022
Team ID	PNT2022TMID28330
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	<p>The user has to register to our website with email-id (or) mobile number .And the user has to enter the company details that includes:</p> <ul style="list-style-type: none"> *company name *company address *company's contact number *company's website link *State *Country
FR-2	User Confirmation	<p>The user has to confirm their account with confirmation code sent to the registered e-mail id or with the one-time-password sent to the registered mobile number. the company has to complete the verification through :</p> <ul style="list-style-type: none"> * kyc verification * Call verification * video verification * verification through our company's staff * One time password to whatsapp <p>All the verification process will be recorded for security purpose.</p>
FR-3	User login	<p>The user has to login their registered account by entering their username/email id and password. And have to verify the captcha . And have to verify through verification code sent to their registered email address or registered mobile number.The account will be logged in only if the user entered the valid username and password.</p>
FR-4	User interaction with dashboard	<p>The user can see our company's information , production rate. And the user can get to know about our product and advantages of our product, the</p>

		disadvantages of the company works without our product. The user can know about every information about our product and also they can know about our regular services ,discounts, and warranty and guarantee for our product and replacement policies.And the usercan see the profit flowchart of each product . and the user can see how to track their order.
FR-5	Booking process of our product	The user has to order to receive our product. They have to select our product and they can read more detailed information about our product. And they can start the booking process. They have to book by selecting our product and by clicking confirm order button. And they have to agree with our terms and conditions and privacy policy.The user has to select the quantity of the product they are about to place order. And the customer can see the arriving date of our product.
FR-6	Confirmation for delievery	To confirm their order the user have to confirm the delivery and have to select the payment method : <ul style="list-style-type: none"> *Bank transaction *Credit card * bitcoin * pay in cash * pay in cheque
FR-7	Maintenance and service	The product has to be maintained and serviced to get a good result and good accuracy. The product will be fixed and serviced by our company staff. First service and fixing process will be done for free. The user can claim warranty if there is any fault occurs in our product. The sensors fixed in freezing area has to be repaired or replaced by our service department. The service or the maintenance will be booked or request will be sent to the maintenance department through the service option given in our website or it can be requested and registered through call.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The customer can use our product in areas like gas pipelines and gas container and all over their factory. So they are able to detect the gas leak . Our monitoring and alerting system will alert the workers and the whole industry. That monitors the gas pipe lines and alerts when gas leak occurs.It triggers the buzzers that creates the loud sound and alerts the whole industries and sends the alert

		messages and also it shows the level of gas spreads.
NFR-2	Security	The gas monitoring system gives the customer the high level security and high level safety. They monitor the gas pipes whether gas leaks happens or not. When the gas leak occurs it notifies the works and the whole industry. So the workers can turnoff the gas pipe. So they can ignore the gas flow in pipes that stops the spread of gas in industry.
NFR-3	Reliability	Our gas monitoring and alerting system will works perfectly even after several years of usage. They have to be maintained properly. Some gases freezes the sensors so the have to be replaced and maintained properly to have a great performance of our product.
NFR-4	Performance	The performance of our product will be great. If it is maintained and serviced properly . The gas leakage monitoring system will works for 24/7. It monitors the gas pipe lines and have 99.9% accuracy of gas leakage . The performance will be good if it was maintained and serviced properly.
NFR-5	Availability	Our product will be available every day. And the sensors are able to detect every gas leaks. That leads to low cost of our product. The customer don't need to fix sensors for every single type of gas. The product has embedded with several sensors. And it is available in affordable prizes too.
NFR-6	Scalability	The gas detection system can detect every types of gases. It can also measure gas in all concentration levels. It can also measure the gas even if it is less in quantity. This provides the industry a high level safety and security. And it is also a kind off prevention.