

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

Date	17 October 2022
Team ID	PNT2022TMID00376
Project Name	Project - Real-Time River Water Quality Monitoring and Control 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-Email	Registration through the application with the help of any email address.
FR-2	User Confirmation-Email	Confirmation is received in the email through which , the user have created account
FR-3	Sensors and actuators	Sensor for sensing physical quantities from the environment.
FR-4	Cloud Account-Access	Cloud technology to append all the sensed data on the internet.
FR-5	Mobile phone- with internet connectivity	As cloud requires internet connectivity, therefore it's a must to have internet connection for receiving updates regularly.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The usability must be easy and self understandable to use by old people and the illiterate. The project contains a interactive UI application specially made for the elderly for easy access. Monitoring of the pH , turbidity of water and acidity level in the water has now been made easy, as every data is sensed and is sent to the cloud platform , which is again interlinked with the app.
NFR-2	Security	There should be no compromise in security. The application is secure enough, and will not ask for any personal sensitive details or will not even try to portray ads. The application offers dual authentication entry.
NFR-3	Reliability	The system should not be in a condition of breakdown during sensing the physical quantities from the environment. The system is reliable, as we are going to make sure of quality sensors and actuators for developing the prototype, and we can expect an efficacy rate of 85-90% from the product.
NFR-4	Performance	Performance should be top tier. Our product should be in a position to outsmart other products available in the market,

		so as to sell the products in high numbers.
NFR-5	Availability	The product needs to be available in most of the regions (nationwide). The product should be even accessible by the village authorities, therefore must be available readily in all parts of the village as well.
NFR-6	Scalability	Scalability is defined as how long the item can be relevant in the market, or in other words, what all change scan be made to the project in the future ,so that it can be more and more attracted towards wider range of audiences.