

Project Design Phase

Solution Requirements (Functional & Non-functional)

Date	30 October 2022
Team ID	PNT2022TMID42308
Project Name	Real Time River Water Monitoring And Control Systems
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 Form Registration through Email Registration through product mobile UI
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	PH level detection	To monitor the water quality PH sensor is used and the signals are sent to Arduino.
FR-4	Turbidity detection	Turbidity sensor TS-300B measures the clarity of element or muddiness utter in the water and the signals are send to Arduino.
FR-5	Ultrasonic generator	Waves are generated at regular interval times the to clear algae 25%,50%,100% .

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	It is efficient to use and has simple monitoring system.
NFR-2	Security	User account is password protected.
NFR-3	Reliability	Real time sensor output values with future predicted data storage. 98% efficient monitoring output. It also gives assurance for aquaculture safety.

NFR-4	Performance	It is environmentally safe model and has greater performance .
NFR-5	Availability	In the form of mobile UI 24 x 7 monitoring system.
NFR-6	Scalability	It is capable to produce a best final output. Highly Scalable.
NFR-7	Stability	Very high stability
NFR-8	Efficiency	It is highly efficient, high mobility and low powered.