Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	7 November 2022
Team ID	PNT2022TMID05141
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.