Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 20 October 2022 |
| Team ID | PNT2022TMID17590 |
| 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.

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| **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.

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| **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. |

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| 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. |