**Project Design Phase-II**

Function Requirements (Functional & Non-functional)

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| TEAM ID | PNT2022TMID50586 |
| PROJECT NAME | Real Time River Water Monitoring And Control Systems |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / SubTask)** |
| 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 measures the clarity of element or  muddiness utter in the water and the  signals are send to Arduino. |
| FR-5 | Ultrasonic generator | At regular interval times the waves are generated 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 has simple monitoring system and efficient to use |
| NFR-1 | **Security** | Mobile application is secured with firewalls protection. |
| NFR-1 | **Reliability** | Real time sensor output values with future predicted data storage. 98% efficient monitoring output. It also gives assurance for aquaculture safety. |
| NFR-1 | **Performance** | It has greater performance and environmentally safe model. |
| NFR-1 | **Availability** | In the form of mobile UI 24 x 7 monitoring system. |
| NFR-1 | **Scalability** | Highly Scalable. It is capable to produce a best final output. |
| NFR-1 | **Stability** | The stability is very high |
| NFR-1 | **Efficiency** | It is highly efficient, high mobility and low powered |