**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID41871 |
| Project Name | Real-time river water quality monitoring and control system |
| 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 mobile number |
| FR-2 | User Confirmation | Confirmation via OTP  Conformation via text message |
| FR-3 | Temperature increase detection | Increase in temperature of river water can be detected by sensors and can send an alert message to user mobile |
| FR-4 | Sample data | Real-time data sample information will be collected through software |
| FR-5 | Web application | A mobile application will be developed and water quality details, analysis report can be viewed by user through smart phone |

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**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** | Can be viewed through user interface screens which will be not more than 5 seconds |
| NFR-2 | **Security** | User account can be password protected with two step authentication which can be verified through OTP |
| NFR-3 | **Reliability** | the system can produce real time analysed data through mobile application |
| NFR-4 | **Performance** | Log in information can be verified within 10 seconds and user can login ,can get accurate data almost all the times |
| NFR-5 | **Availability** | Maximum down time will be about 4 hours |
| NFR-6 | **Scalability** | System can handle user traffic without crashing upto 1000 users |