**Project Design Phase-II**

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

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID36055 |
| Project Name | Efficient Water Quality Analysis and Prediction using Machine Learning |
| 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 Email |
| FR-2 | User Confirmation | Confirmation via OTP in Email |
| FR-3 | User Login | After registration , the user can login into the webpage |
| FR-4 | User Query | Once logged in , the user can submit the query of the WQI of the water sample by giving the required data inputs needed. |
| F5-5 | Query Solution | After analysing the data inputs , using ML Model , the webpage would calculate the WQI and display it to the user in the webpage . |

**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** | User can easily find the WQI of the water sample with just entering few water data input values. |
| NFR-2 | **Security** | The user profile is secured through registration by email and the login is possible only by the OTP providing high security. |
| NFR-3 | **Reliability** | The ML Model is very reliable in reporting the WQI value if the data inputs are correct. |
| NFR-4 | **Performance** | Higher performance compared to pre existing and manual methods. |
| NFR-5 | **Availability** | Through the proposed webpage the WQI analysis can be done anytime and anywhere. |
| NFR-6 | **Scalability** | User can analyze and measure the WQI easily. |