**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

|  |  |
| --- | --- |
| Date | 22 October 2022 |
| Team ID | PNT2022TMID22872 |
| Project Name | Project – Real Time River water quality monitoring and control system. |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

OPEN WEATHER API

OUTPUT

COMMANDS

SENSOR DATA

NODE RED

INPUT

COMMANDS

YES

INTERNET GATEWAY

PYTHON SCRIPT TO RECEIVE COMMANDS

**Table-1: Components & Technology:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Components** | **Description** | **Technology** |
| 1. | Received data from sensors | Data collected from the sensor which is placed in river. | ESP32 Wi-Fi module |
| 2. | Web interface | Final data were displayed | HTML, CSS, Java script |
| 3. | Data base | Datatype | My SQL |
| 4. | Cloud database | Data base service on cloud | IBM Cloud |
| 5. | Data storage | File storage requirements | IBM Block storage |

**Table-2: Application Characteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. NO** | **Characteristics** | **Description** | **Technology** |
| 1. | PH level monitoring | PH level of river water can be monitored. | PH-Sensor |
| 2. | Temperature monitoring | The temperature of river water can be monitored. | Temperature sensor |
| 3. | Pollution monitoring | The purity and clearness of river water can be monitored. | Conductive sensor |
| 4. | Soil level monitoring | The amount of soil mixed in river water can be measured. | Turbidity sensor |