REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM USING IoT

Submitted by

SWATHI.A.P (113219041120)

SOWMYA.A (113219041114)

MADHUMITHA.S (113219041060)

KOKILA.B (113219041053)

BACHELOR OF ENGINEERING IN ELECTRONICS AND COMMUNICATION DEPARTMENT

Project Title: Real time river water quality monitoring and control system
Project Design Phase-I - Solution Fit Template
Team ID: PNT2022TMID23523

1.CUSTOMER SEGMENTS

- **The people who consume river water for their daily use are the customers of this project.**
- **Farmers can use river water for agricultural purposes.**
- **The water can be used for food production in hotels.**

6. CUSTOMER CONSTRAINTS

- **The resources in terms of financial as well as man power are inadequate.**
- **Lack of training for data management and statistical tools.**
- **Low flow and no flow conditions prevail during summer months at number of locations.**

5. AVAILABLE SOLUTIONS

- **The temperature of water can be monitored.**
- **The PH level of water is identified.**
- **Amount of oxygen dissolved in water.**

2.JOBS-TO-BE-DONE / PROBLEMS

- **Improper internet connection will interact the connections between hardware and software.**
- **The quality of water is identified and notify the people whether to use it for daily purpose or not.**

9. PROBLEM ROOT CAUSE

- **A single person cannot monitor all the parameters at the same time but by using this project each and every one can able to check and monitor all the parameters like temperature, turbidity and PH level.**
- **If anything is not going well notification will be sent to the user not to consume it.**

7. BEHAVIOUR

- **The problems faced by the customers can be addressed with the help of customer care feature.**
- **The problems we get here will be solved soon and they can use it again without any difficulties.**

3. TRIGGERS

- **In case of without using mobile app, one should always be there to maintain the parameters and the maintenance cost should be paid.**
- **But, in case of using mobile app the maintenance cost can be avoided and we can able to monitor the parameters from wherever we are.**
- **By seeing these advantages, many industries come forward to use the app and benefit the people.**

4. EMOTIONS:

BEFORE:

- **Before implementing this project people feel it difficult to enjoy boating, fishing and provision of safe drinking.**
- **They also face major problems in the development of industrial, hydroelectric and agricultural water requirements.**

AFTER:

- **After implementing this project people can able to face all these above mentioned problems easily.**

10. YOUR SOLUTION

- **The PH level of water is identified.**
- **Turbidity of water is identified.**
- **Conductivity of water is identified.**
- **Temperature of water is always monitored.**
- **Amount of oxygen dissolved in the water.**
- **TDS are used to describe the salinity level of water.**
- **Monthly report of maintaining the water will be displayed.**

8. CHANNELS OF BEHAVIOUR

OFFLINE:

- **The hardware setup should be installed properly.**

ONLINE:

- **The software used should be properly studied by everyone to operate it.**
- **The software and hardware connections should be given properly.**