REAL TIME RIVER WATER MONITORING AND CONTROL SYSTEM

Team ID :

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Existing Problem

- If large amounts of fertilizers or farm waste drain into a river the concentration of nitrate and phosphate in the water increases considerably. Algae use these substances to grow and multiply rapidly turning the water green.

- This massive growth of algae leads to pollution. when the algae die they are broken down by the action of the bacteria which quickly multiply, using up all the oxygen in the water which leads to many problems .

- To avoid those problems, control the algae and monitor the water parameters like PH, temperature in the river water.

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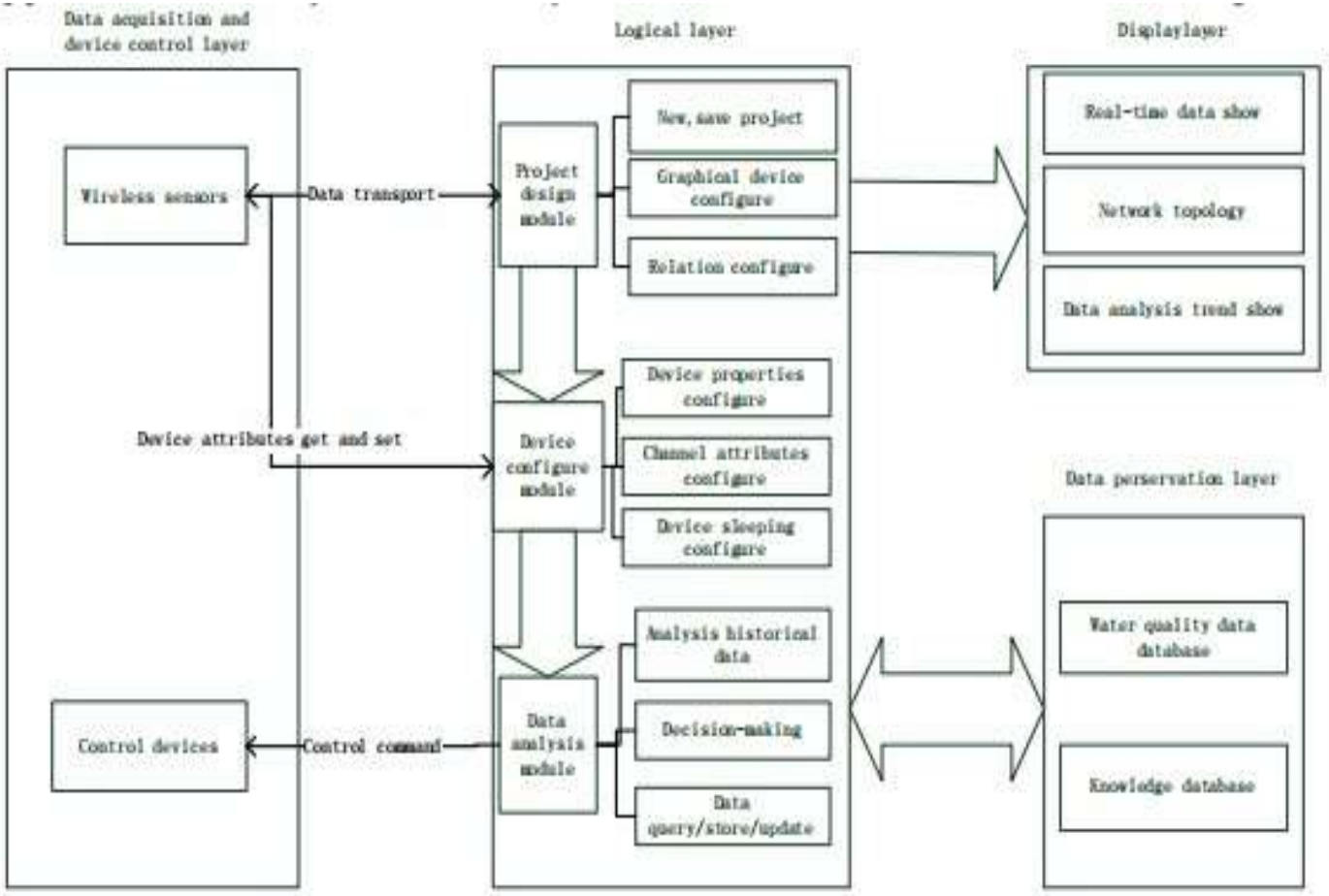
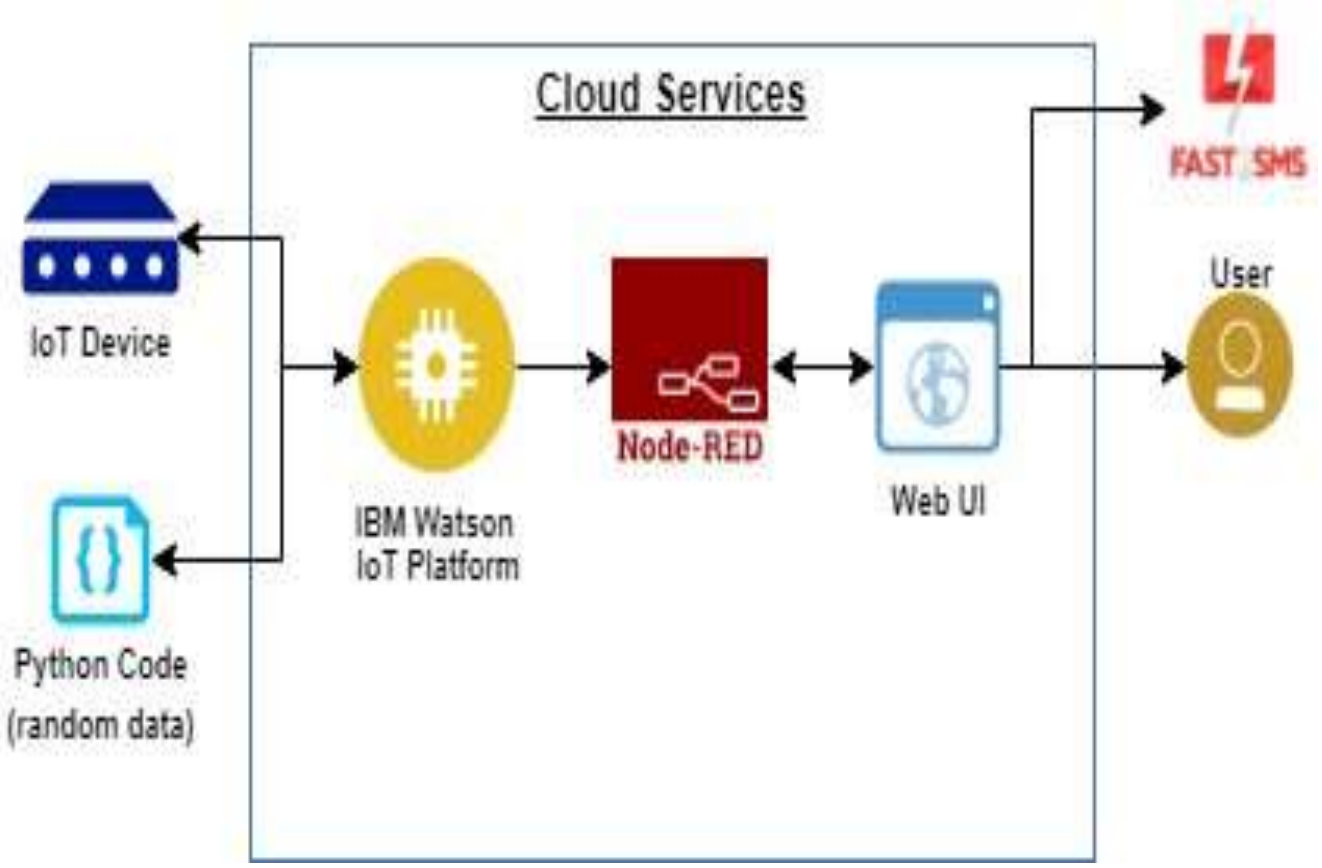
Proposed Solution

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To **control the algae** and monitor the value of **PH, Turbidity** present in the river water.
2.	Idea / Solution description	The system consists of more **number of sensors to monitor the PH, Turbidity** and etc., and **control the algae by using ultrasonic frequencies.**

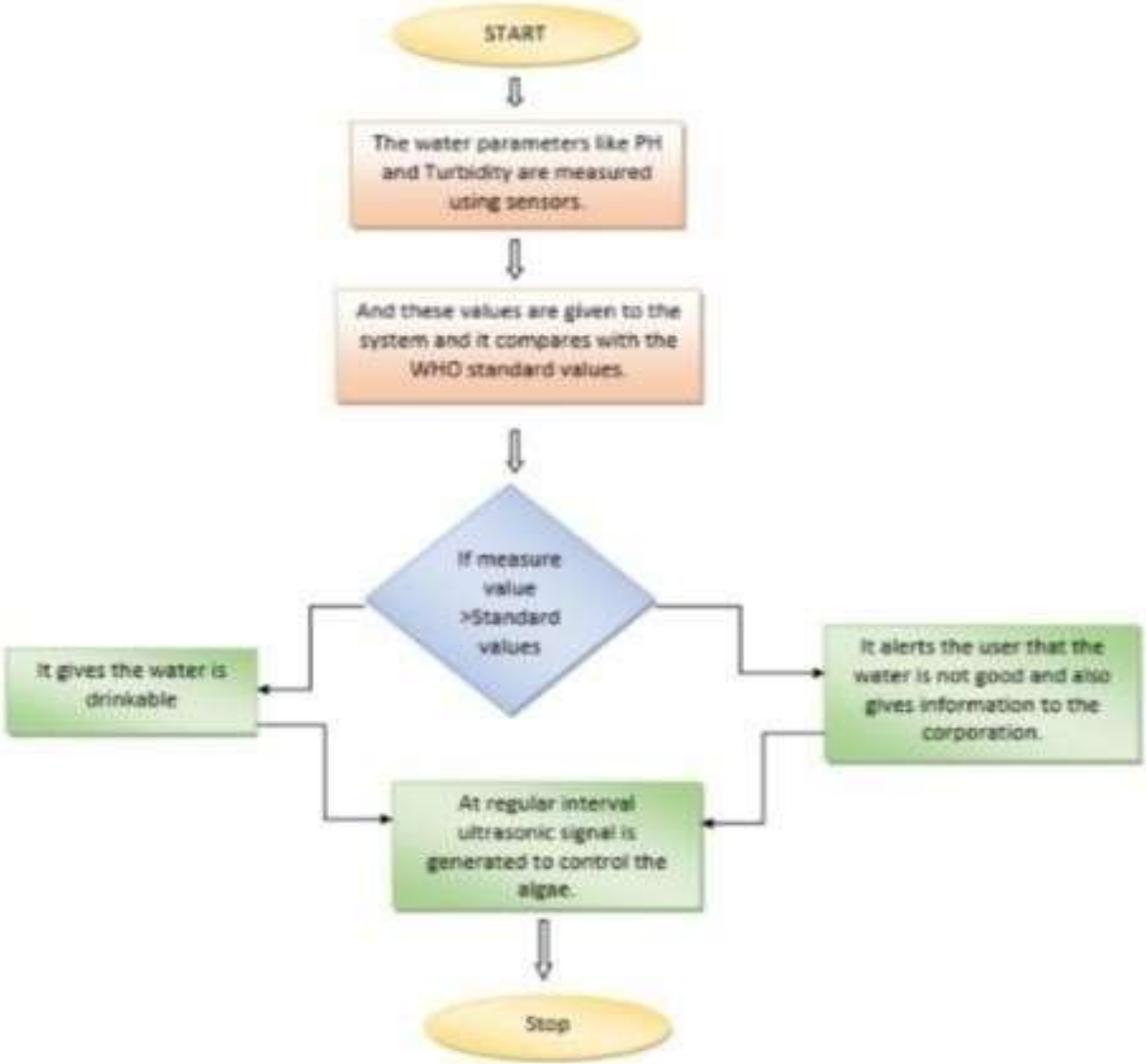
Solution Architecture Diagram



Technical Architecture:



Data Flow Diagram


START
The water parameters like PH and Turbidity are measured using sensors.
And these values are given to the system and it compares with the WHO standard values.
If measure value >Standard values
It gives the water is drinkable
It alerts the user that the water is not good and also gives information to the corporation.
At regular interval ultrasonic signal is generated to control the algae.
Stop

Performance Metrics

- The performance of the system is good and it is easy to find the quality of the water. The performance of the system is achieved by nearly 80% of the expected output of the system

Advantages

- Easy detect the quality of the river water.

- Power consumption of the system is low.
- We can give the clean water.
- Easy to access the application.
- People are uses the river water without fear.
- Water pollution can be controlled.

Disadvantages

- Cost of the sensor is high.
- If the problem arises in the system, it cannot be solved by the user.

- Sometimes, sensors give the wrong PH value.
- If the river gets flooded, then the sensors are damaged.
- Need to maintain the system always.

Conclusion

- By this Real time river water monitoring and control system, we can easily identity the quality of the river water. Also the people have to use the river water without any Fears.

Future Scope

The future scope of this project is monitoring environmental conditions, drinking water quality, treatment and disinfection of waste water etc. This system could also be implemented in various industrial processes. The system can be modified according to the needs of the user and can be implemented along with lab view to monitor data on computers.