












Real-Time River Water Quality Monitoring and Control System

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SCENARIO Testing and Experimenting with various water sources	 PREREQUISITE	 PROJECT FLOW	 WORKING	 BENEFITS	 OUTCOME
 Steps What does the person (or group) typically experience?	Knowledge on Internet of Things (IoT) Availability of IoT related technology	A water quality monitoring system is essential to monitor the quality of water in a large area of water bodies such as river. In present era, the Internet of Things (IoT) and are used in a variety of research fields to supervise, collect, and analyse data on quality of water.	To Collect data from the water bodies. To check for the water quality parameters and compare it with the standard or threshold values Take corrective measures if quality of water is found inadequate.	Reduces the risk of water contamination and pollution preserving the natural resource Helps in reducing water-borne diseases that may turn into a Epidemic.	The related authorities can take measures to boost the water quality which makes it more usable for human purpose.The water monitoring system with high frequency, high mobility, and low powered.
 Survey Details What interactions do they have ateach step along the way? <ul style="list-style-type: none">Existing SystemsPolluted percentageNeed for the project	Real-time data access can be done by using remote monitoring and Internet of Things (IoT) technology.	Analyze the parameters such as temperature,pH and conductivity,turbidity and so on. Design of a Smart monitoring system with the above paramters for deeming the quality of water.	If the measured value > standard value/Threshold value - alert the corresponding authority or agent	Promote awareness among people to maintain the quality of water. Prevention of water borne diseases	We focus only on monitoring the quality of river water parameters due to economic constraints . This project can be modelled into a control and management system in future
 Goals & fulfillments	The system consists of several sensors to measure and acquire the physical and chemical parameters of the water.	To design a system for active monitoring of river water quality using wireless sensor networks with low energy consumption, relatively inexpensive, and improved accuracy to fulfil the expectations of the customer.	The acquired data is stored in the cloud and can be used anytime by the concerned authorities	Requirement of a cost effective water quality monitoring system. Timely alerts when required	Conventional methods that are time and labour Intensive and economically expensive are sorted
 Advantages	Water quality can be monitored, stored in a database,and can be controlled using IoT.	A programmable smart sensor system for water quality monitoring system in an IoT environment is crucial for an effective and efficient water quality monitoring system.	Water quality parameters are acquired actively and in a reliable Manner.	Increase in awareness about contamination of water and water related resources. Cultivate the need for saving water .	Low-cost water quality monitoring system for a large coverage area was designed .
 Disadvantages	Sensors are installed in fixed position	Sensor may malfunction and often require replacements	Mounted Sensors may get damage during natural disasters and often by aquatic animals.	Maintenance cost is high.	To test more parameters of the water quality , the range of parmaters and a few other paramters can be included.
 Required Areas	Used in the agriculture for cultivation and other purposes	Detecting PH level in river water	Used in the industrial purposes	Used in the public water tanks	Used in the house water tanks to check the incoming water from local water resource