












Real-Time River Water Quality Monitoring and Control System

SCENARIO Testing and Experimenting with various water sources	 PREREQUISITE	 PROJECT FLOW	 WORKING	 BENEFITS	 OUTCOME
 Steps What does the person (or group) typically experience?	<div>Techniques</div> <div>Availability of Internet of Things and Remote sensing</div> <div>purpose</div> <div>To purify the water Resources</div>	<div>sites</div> <div>It is necessary to observe the water quality in a large area such as lake, river, and aquaculture</div> <div>Process</div> <div>IoT and remote sensing techniques are used to aggregate and analyzing data from the remote locations</div>	<div>Info Transfer</div> <div>An android application will be used to determine the sensor values and examined via cloud and warnings will be provided to user</div> <div>The values are then compared with the threshold value</div>	<div>It Can diminish the contaminants present in water</div> <div>It changes to a drinking water</div>	<div>The related authorities can take measures to boost the water quality which makes it more usable for human purpose</div> <div>It has high frequency, high mobility, and low powered.</div>
 Interactions What interactions do they have at each step along the way? <ul style="list-style-type: none"> People: Who do they see or talk to? Places: Where are they? Things: What digital touchpoints or physical objects would they use? 	<div>Real-time data access can be done by using remote monitoring and internet of Things (IoT) technology.</div> <div>Can be displayed in visual format on a server PC</div>	<div>To check water quality by analyzing the parameters such as Temperature ,pH and conductivity, and so on</div> <div>It supervising, congregate and analyzing data from the remote locations</div>	<div>If the acquired value is above the SMS alert will be sent to the user</div>	<div>Using IoT integrated Big Data Analytics will immensely help people to become conscious against using contaminated water</div>	<div>It can be extended into an efficient water management system of a local area.</div>
 Goals & motivations At each step, what is a person's primary goal or motivation? ("Help me..." or "Help me avoid...")	<div>Customer requires the system consist of several Sensors</div> <div>It is used to measuring physical and chemical parameters of the water.</div>	<div>The aim is to develop a system for continuous monitoring of river water quality at remote places using wireless sensor networks</div> <div>With low power consumption, need</div>	<div>The data will be stored in the cloud or local storage will be implemented</div> <div>Using the sensed parameters, the customer predicts the water quality</div>	<div>The customer requires a low cost system</div> <div>By the sensors, water contaminants must be detected.</div>	<div>The issue is that the traditional method, such as workers, needs to go to each tank or river to collect data</div>
 Positive moments What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?	<div>This project has successfully achieved its objective where water quality data (pH and temperature) can be monitored</div>	<div>Implementation by a reconfigurable smart sensor interface device for water quality monitoring system in an IoT environment</div>	<div>It proposed the system collects parameters of water pH, turbidity on the surface of water</div> <div>With high speed from multiple different sensor nodes.</div>	<div>It will immensely help customer to become conscious against using contaminated waste as well as to stop polluting the water.</div>	<div>It was satisfied by low-cost water quality monitoring system has been developed for large area of coverage</div> <div>It was attributed to its long duration operation, flexibility, and reproducibility</div>
 Negative moments What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?	<div>Customer felt that the sensors are installed very deep inside the water and their positions are fixed.</div>	<div>The sensors which work on power source may often required to be replaced in case of malfunctioning.</div>	<div>Mounted Sensors may get damage during natural disasters and often by aquatic animals</div>	<div>The maintenance cost is also very high.</div>	<div>To test other Parameters, the new sensors can be included.</div>
 Areas of opportunity How might we make each step better? What ideas do we have? What have others suggested?	<div>The design of a real time, and low cost water quality monitoring system</div>	<div>Track whether protection and restoration measures are working</div>	<div>Customer can analyse data continually and instantly alert users to changes in the system.</div> <div>It reduces the need for unreliable and expensive sampling.</div>	<div>No need to compromise the water quality by the presence of infectious agents, toxic chemicals, and radiological hazards.</div>	<div>The system has wide application and it is usable and affordable</div>