

Ideation Phase

Ideation

DATE	18 October 2022
TEAM ID	PTN2022TMID48605
PROJECT NAME	REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM
MAXIMUM MARKS	4 Marks

IDEATION PHASE

The main aim is to develop a system for continuous monitoring of river water quality at remote place using wireless sensor networks with low power consumption, low-cost and high detection level, accuracy. pH, conductivity, turbidity, etc. are the limits that are analysed to improve the water quality.

Following are the aims of idea implementation:

- To measure water parameters such as pH, dissolved oxygen, turbidity, conductivity, etc.
- Using available sensors at a remote place.
- To assemble data from various sensor nodes and send it to the base station by the wireless channel.
- To stimulate and evaluate quality parameters for quality control.
- To send SMS to an authorized person routinely when water quality detected does not match the present standards, so that, necessary actions can be taken.

Control Surface:

An Arduino mega is utilized as a core person. The Arduino victimized here is mega 2560. Because, multiple analog sign sensors probe requisite to be continuous with the Arduino inhabit. It has a set of registers that use as a solon use RAM. Specific intend to know registers for on-chip component resources are also mapped into the assemblage grapheme. The addressability of store varies depending on instrumentation series and all PIC devices someone several banking mechanisms to utilise addressing to additional faculty. Subsequent series of devices have move instructions which can covert move had to be achieved via the register. Thus the mechanism functions with the exploit of coding intrinsically in the Arduino UNO R3 skate.

pH sensor:

The pH of thing is a useful constant to display because graduate and low pH levels can hump large effects on the author. The pH of a statement can grasp from 1 to 14. A pH sensor is an instrumentation that measures the hydrogen-ion density in a bleach, indicating its tartness or alkalinity. It constitute varies from 0 to 14 pH. Uttermost pH values also process the solubility of elements and compounds making them cyanogenetic.

Turbidity sensor:

Mathematically pH is referred as, $\text{pH} = -\log [\text{H}^+]$.