IOT WATER QUALITY MONITORING SYSTEM

ABSTRACT

The IOT-based smart water purifier represents a ground breaking innovation in ensuring access to safe and clean drinking water. This system integrates Internet of Things (IOT) technology with advanced water purification processes to offer real-time monitoring, automation, and enhanced user convenience. The smart purifier continuously tracks water quality parameters such as pH, and temperature, providing real-time data to users through a mobile application or web interface.

OBJECTIVE OF THE PROJECT

Due to the impact of polluted water globally tremendous changes are taking place towards development of a reconfigurable smart sensor interface device for water quality monitoring system in an IOT environment. Water quality monitoring system measures the water level parameters are collected by the sensors. The sensors are sending to the microcontroller board. We are using sensors like Turbidity, ph sensor, and flow sensors. This sensor controls the whole operation and monitored by Cloud based wireless communication devices. The microcontroller system can be seen as a system that reads from the input perform processing and writes to output. For his Water monitoring system output will be in digital form. In this output of these sensors directly goes to the microcontroller. Whenever outputs of the other sensors are in analog form. Then we need to convert the analog values to digital values before connecting to the controller. In this paper water quality is pure as sensors play a major role for water quality monitoring system, the time and costs in detecting water quality of a reservoir as part of the environment.

EXISTING SYSTEM

In olden days usually water is contaminated by several reasons. There are no specific ways to check the quality of drinking water. Years after that some techniques are introduced to check the quality of water and there by purifying the water . The equipment cost is high and takes more time. We have to check the water quality manually and we are not getting any alerts. Now a day’s water is contaminated more because of the pollution. So with the advancement of technology, we are using many techniques to check quality of water. One major technique is by using IOT.

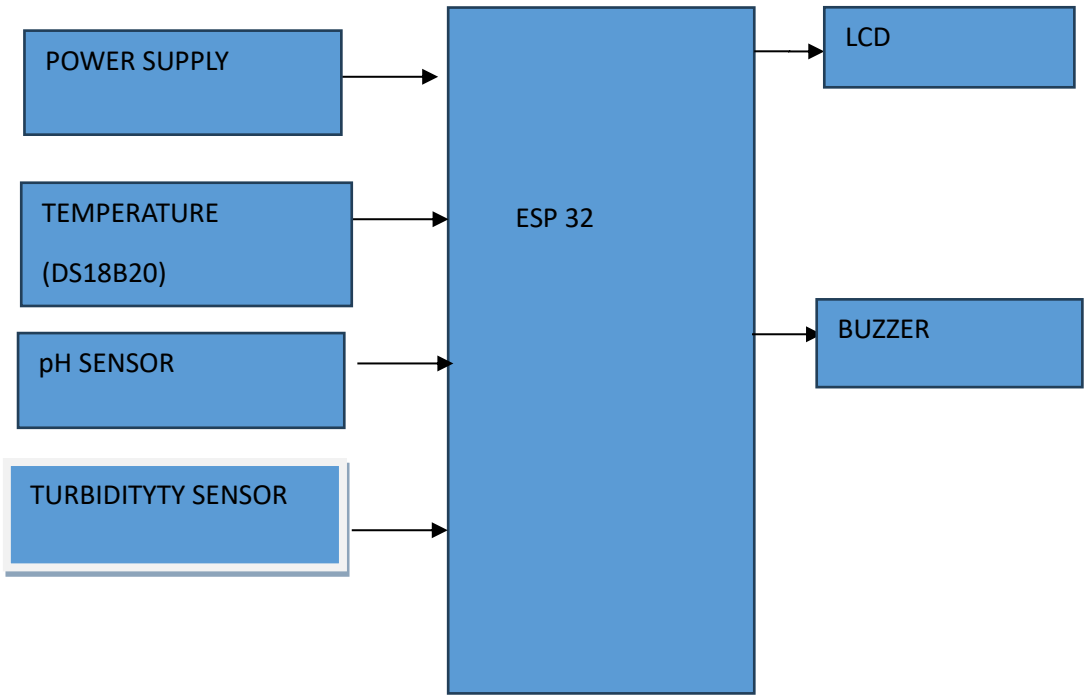
DRAWBACKS

- It takes lot of time.
- Equipment cost is high.
- We are not getting any indication about the quality of water.

1.3 PROPOSED SYSTEM

The effective and efficient system of water quality monitoring (WQM) are critical implementation for the issue of polluted water globally, with increasing in the development of Wireless Sensor Network (WSN) technology in the Internet of Things (IOT) environment, real time water quality monitoring is remotely monitored by means of real-time data acquisition, transmission and processing. This paper presents a reconfigurable smart sensor interface device for water quality monitoring system in an IOT environment. The proposed WQM system collects the parameters of water data such as Temperature, conductivity, ph sensor, and flow sensors.

BLOCK DIAGRAM



Water purification based on PH values

PH Range	Classification
0 to 6.9	Acid
7	Neutral
7.1 to 14	Base

Key Words

- ESP32,
- PH Scale
- Turbidity Sensor
- buzzer & IOT.

INTERNAL GUIDE

Dr. V. NARAYAN GOUD (PhD)

SUBMITTED BY BATCH -B9

MANGALI MADHU SUDHAN 21MG1A04A5

JILLEPALLI JAGADEESH 21MG1A0496

SOYAM ANIL KUMAR 21MG1A04B1

KANCHARLA KALYAN BABU 21MG1A0498