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Water Monitoring System Using Aurdino with LabView

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Abstract: – Water is the one of the element and the Necessity that must major global to the daily life. Approximately 71% of surface of earth is covered by water. Now a days increasing of urbanization, agricultural and industrial practice. Bring a bad effect on both earth and ground water and it will decrease the quality of water. Hence the water related disease are increases so avoid this problem we do this project. We have to continuously monitor the quality of the water. In this model various sensor use to measure the water parameter using Aurdino measured data from sensor viewed on Labview **.**

Keywords: Aurdino module, turbidity sensor, pH sensor, temperature sensor.

I. INTRODUCTION

Water is important natural resources our daily routine start with water. Most important use of water to human is a drinking water, wash and bath. Water is not only for human but also for aquatic life. If you do not maintain the quality of water cause the water related problem so we have to maintain quality of water. In this model we continuously monitor quality of water using aurdino and labVIEW.

II. LITERATURE REVIEW

Quality of surface water reduced by point and non point sources pollutant. point source is sewage, industrial effluent and so all while non point source is urban and rural run off. Residential area and make river water are unsuitable use for human for human activity. Water quality is a tested by various sensor. Like pH sensor, temperature sensor, turbidity sensor.

Geetha S and Gauthami s have presented a paper entitled. “Internet of thing enabled real time water quality monitor system. This paper presents on excellent literature review of work carried out in the field of water quality monitoring system. It provides alarm system to indicate problem.[1]

Jayati B and Jignesh P have presented paper entitled “Real Time Water Quality Monitoring System.” That describes a novel water quality monitoring system based on the concept of IOT. Various parameter define the water quality such as temperature, pH, turbidity, conductivity are measured using sensor. Raspberry pi and Zigbee protocol are used in process.[2]

The standards of drinking water quality are decided by the WHO guideline.[3]. This world health organization decided the standard of drinking water parameter like microbiological chemical and indicator parameter monitor frequently so that protect the health of consumer and ascertain that water is a clean or not. The wireless sensor network used to control the parameter pH, temperature required for pisiculture using NI my RIO and by using that data they control motor, pump and filter[4].

The prototype was developed using ultrasonic sensor, node MCU, LABVIEW. Ultrasonic sensor measured water level. The sensed value was sent to Google cloud platform by node MCU. In the LABVIEW front panel the webpage was accessed and accordingly the water level was monitored by
adjusting the valves [5].

III. PROPOSED METHODOLOGY-

The proposed system consist of Arduino UNO, temperature sensor ,turbidity sensor , pH sensor . there was interfacing between Arduino and LabVIEW. Depending on sensor reading using Arduino and reading display on the LabVIEW.

The prototype was developed using Arduino , temperature sensor, turbidity sensor, pH sensor . the data obtain from these sensor and given to the Arduino . simultaneously at the other end of the receiver receive the data and display on PC using LabVIEW. All these sensor ,Arduino and powered by 5v power supply. The design cost of this module is less.

Temperature sensor :- temperature of water is one of the most important property because of other parameter depend on temperature for accuracy .

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PH sensor :- pH is a important parameter of water . it is use to measure acidity or alkalinity of water . pH scale is range from 1to 14 . the range from 1 to 6 solution is acidic and pH scale is range from 8 to 14 is solution is alkaline and 7 to 8 is neutral . when pH scale reading is 7 at that time temperature is 25 degree . the normal drinking water pH scale is 7 to 8.

Turbidity sensor :- turbidity measure the clarity of water . the clear water has low turbidity and muddy water has high turbidity .

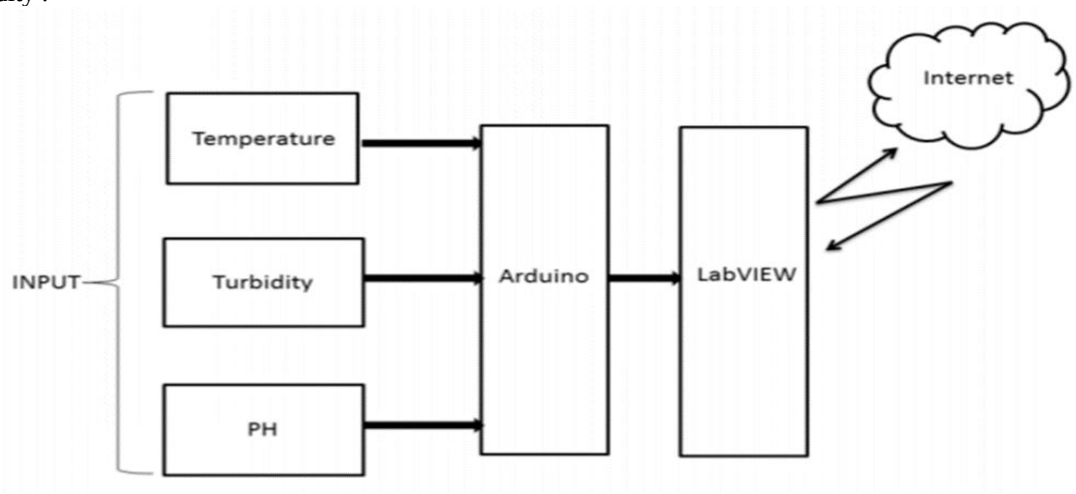

Fig . Block diagram

IV. RESULT AND DISCUSSION-

In this work we obtain various water samples and tested and we test the water pH, turbidity and temperature. We test two different samples of water and obtain value are in below table.

Variable	Quality Range	Test sample 1	Test sample 2
pH	6.5-8.5	7.9	13.84
Turbidity	5-10	5	2.95

V. CONCLUSION

A system to monitor the water quality parameter has been proposed in this work with the help of various sensors we monitor the various parameter like as temperature , pH ,turbidity etc. this system not need any manual intervention working cost and time is very low. The quality of water is important in many application such as chemical industries ,house ,home ,agriculture etc.

VI . REFERENCES

[1] Geeta S and Gauthami S have presented a paper entitled “Internet of Thing enables real time water quality monitoring system “,27 july,2017

[2] Jayti Bhatt, Jignesh Patoliya ,IOT based water quality monitoring system ,IRFIC,2feb ,2016

[3] Guidelines for Drinking-Water Quality, World Health Organization, Geneva, Switzerland, 2011.

[4] Beena V., Khaja Moinuddin,” Water quality Measurement & Control from Remote Station for Pisiculture using NI my RIO,” International journal for research in Electronic and Telecommunication volume-2, Issue-4,PP.16-21, June-2015.

[5] Charles A, Ayylusa my C, Deepak Raj J, Keerthi Kumar, Thiruvarasan KE, “IOT BASED WATER LEVEL MONITORING SYSTEM USING LABVIEW”, International Journal of Pure and Applied Mathematics, Volume 118, No. 20, 2018, pp 9-14