DESIGN OF IOT BASED DAM CONTROLLING AND MONITORING SYSTEM

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Abstract - *Checking Dams wellbeing and water the executives is critical considering both the circumstances like water shortage and abundance of water. It is of significant significance and requirements to create data framework dependent on existing framework permitting use of canny sensors organization. Fundamental thought is to depict conceivable outcomes of IoT applications in Dam Safety and water the executives. Here the whole dam and the principle pipeline is detected 24x7 through different sensors. These remote sensor hubs associated with one another and sends the information to a door. Basic extra room CLOUD stores and gives on line data to the onlooker. Utilizing an IoT for the said reason will help saving the most valuable normal asset the water. Here in this task an endeavor is made proposing an electronic circuit configuration utilizing an Internet of Things idea for the reason.*

Key Words: **IoT, CLOUD, Sensors, Circuit configuration, Remote Sensor**

1. INTRODUCTION

Dam assumes a significant part in our life as they are utilized for purposes, for example, flood control and age of power. There are roughly 5200 significant and minor dams in India. Presently a days the dam specialists are dealing with numerous issues as the climate conditions are not steady and furthermore the checking of dams is impossible constantly by them. Manual perceptions take additional time and this can likewise cause loss of constant information and at times turned into the justification forthcoming calamity. The model investigation will help in diminishing these difficult which are looked by the dam specialists. The venture is to carry out the applications which will screen the water level, demonstrate to the specialists and furthermore the entryways will be open consequently when the water surpasses the specific level. The web of things is picked for checking and alarming on continuous premise.

2. RELATED WORKS

The improvement of independent dam entryways framework utilizing level sensors and engine regulator. Albeit the dam doors are consequently controlled utilizing

DC engine however no data is given with respect to the water level.

The framework which can advise the current status of the dam and furthermore cautions when the dam conditions have transformed from the ordinary conditions.

3. EXISTING SYSTEM

Dams did not have any automation systems. Dam gates were only controlled manually. A person was allotted to operate the dam gates. The water level of dams was only measured using a scaling measure fitted at dam ends. The person who is responsible for monitoring water level monitors and intimates when to open or close dam gates to the person who is responsible for opening the dam gate. Intimations about opening or closing of dam gates weren't given to the people who live nearby the dam banks

4. PROPOSED METHOD

It is very easy to use and definitely useful for preventing floods and other harms due to rapid changes in Dam water. Therefore, water level indicator designing is one of the technological advancements to transmit data and received by authority for controlling. If water level increases to dangerous level, the systems also give an alert to authority to take immediate action.

5. METHODOLOGY

In this system it consists of various sensors like water flow sensor, water level sensor, vibration sensor and ultrasonic sensor. These sensors take actual physical quantity and this transmitter and according to these data information is given to the microcontroller through wireless LCD display shows the quantity like vibration, water level low or high etc.

We have another advance option to opening of dam gates according to water level. IoT used for transmission of this information over long distance by using IoT wireless technology. At another end IoT is used to collect this information and given to PC and we develop one IOT Application to update this information on Internet webpage for public access for security purpose of nearer area.

System will be generating immediate alert for sudden changes in water like rapid hike in water level or major change in vibration values in android application.
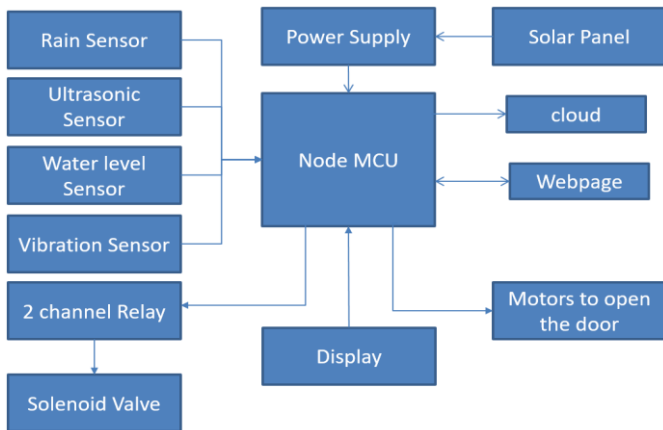
6. BLOCK DIAGRAM

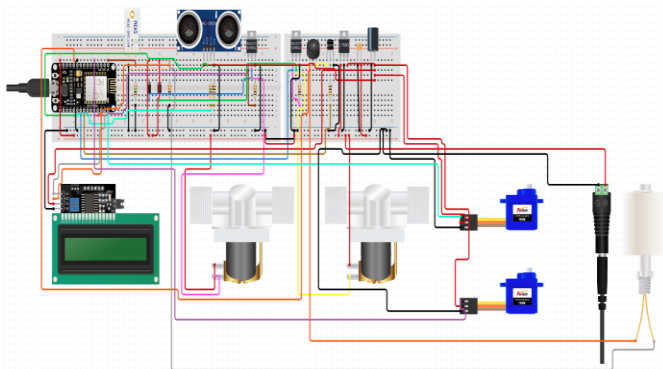**Fig -1**: Architecture

7. CIRCUITAL SETUP

Fig -2: Circuital Arrangement

7.1 WORKING

Our model framework has constant water level observing and the water level will be demonstrated to the specialists persistently. It is a mechanized interaction where the dam doors will be opened consequently and the control should be possible by the specialists utilizing an application. It likewise has LED and ringer framework which shows the ascent of water level and gives early aware of the specialists so they can move individuals to a more secure spot prior to opening of doors which helps in diminishing impacts of flood to a degree. By utilizing this thought we can lessen the labor needed at every single dam. Since this is a completely robotized project, any sort of human movement can be kept away from. So, the chance of issues has likewise diminished. During seasons of cataclysmic event like floods this technique shift help full as we don't have to any have human

to control close to the real site of the dam. The alert given to the specific specialists can make the fundamental strides and offer guidelines to individuals.
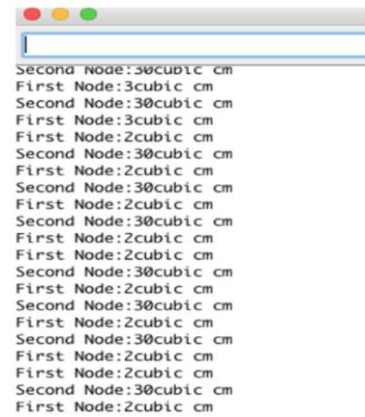
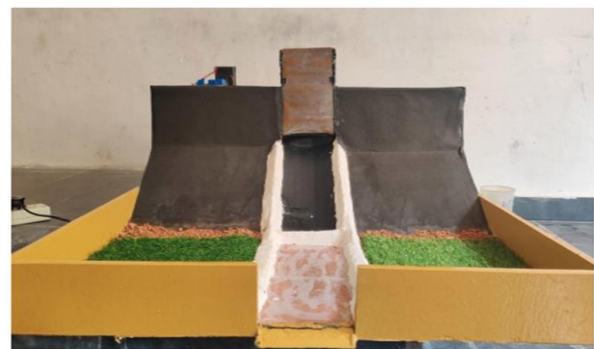## 8. EXPERIMENTAL OUTPUT

Fig -3: Sensor Details

Fig 4: Prototype of the Dam

9. CONCLUSIONS

This framework will help dam position to know the dam boundaries without checking physically by the mean of Display and Web entry. It depends on IoT Hence the speed of information transmission is high and likelihood of losing ongoing will be less. This framework is dependable and less expensive to introduce in each dam and a web-based interface can give nitty gritty boundaries of all dams in India.

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