

DEVELOPING INDUSTRIES UNDERGROUND WATER LEVEL LIMITS BY DESIGNING A MAINTENANCE AND CONTROLLING SYSTEM USING IOT

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Abstract: In order to avoid wasting natural and financial resources, underground water consumption in industries has been the target of consciousness and reduction policies. It is biggest problems for governments. The draft rules notified had said that even the district magistrates had power to give NOCs if the abstraction of water was 20-50 cubic meters per day depending upon the type of the area. This project describes the development of an online control system using flow meter sensor for measurement of underground water consumption for industries. The proposed system collects data from a flow meter, which is equipped with a bore well, and sends such information over the internet to a server (municipality) and consumer, dispensing automatic reading of the water flow. This method allows live monitoring of ground water consumption, as well as providing identification of consumption patterns. Where it reproduced the failures of a real environment. We can control motors through online. Water wastage is the biggest problem in homes of a developing country like India. Cloud Computing and big data analytic are combined to ICT to produce more efficient applications. Cloud Computing support the applications with the necessary infrastructure i.e. storage, platform, and service as needed

Keywords: Nodu Microcontroller, Flow Meter and Motor.

I. INTRODUCTION

Currently drinking water is very prized for all the humans. As of late water levels are low and water in the lakes is going down. So it's too imperative to even think about finding the answer for water observing and control framework. IoT is an answer. Lately, improvement in

figuring and gadgets innovations has set off Internet of Things innovation. Web of Things can be portrayed as the organization of hardware gadgets conveying among them by the assistance of a regulator. The IoT is an assortment of gadgets that cooperate to serve human undertakings in a productive way. It consolidates computational ability to send information about the conditions. These gadgets can be in type of sensors, apparatuses, installed frameworks, and information examination central processor. This venture presents a minimal effort water observing framework, which is an answer for the water wastage and water quality. Wi-Fi regulator and sensors are utilized for that system. This project centers around checking of utilization of water, for instance consider, by one square of house in a level framework, where at the segment of pipeline from where the water gets redirected to different piece of a square. By this framework ceaseless screen and programmed control the engines and information stockpiling in online site page.

II EXISTING METHOD

Current water network structures are based on large and centralized systems in which the management options are limited. The significant limits of these frameworks are Low working productivity because of the lopsidedness between the stock of and interest for new water, misfortune or potentially defilement of the inventory water, high energy necessities for creation and transportation of the stockpile water, high treatment cost as well as low treatment effectiveness of both stockpile water and waste water because of the fixed treatment cycles, and absence of joining of elective water sources. To beat these constraints, another water the executives plot that can make ongoing administration conceivable is required.

III PROPOSED SYSTEM

This technique presents a schematic procedure for savvy telemetry for use in underground water the board stages, which incorporates data and correspondence innovation into a solitary water the executives plot. Shrewd telemetry innovation is viewed as a promising answer for settling late basic worldwide water issues. To ensure the security of water quantity, safety of underground water quality, intelligent control of water flow using bi-directional communication in water infrastructure, better management scheme dealing with risk-minimization for assets in the water infrastructure, and energy efficiency in operating and maintaining water infrastructure.

IV BLOCK DIAGRAM

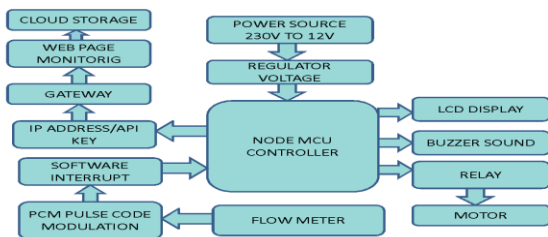


Fig:1 Block Diagram for Proposed System

In this Block Diagram The Node MCU (Node Microcontroller Unit) is open source programming and equipment advancement climate that is worked around an economical System-on-a-Chip (SoC) called the ESP8266. The ESP 8266 planned and made by Espressif Systems, contains all pivotal components of the advanced PC: CPU, RAM, organizing (wifi), and even a cutting edge working framework and SDK. Be that as it may, as a chip, the ESP8266 is likewise difficult to access and utilize. You need to weld wires, with the proper simple voltage, to its PINs for the least difficult errands, for example, controlling it on or sending a keystroke to the "PC" on the chip. What's more, you need to program it in low-level machine directions that can be deciphered by the chip equipment. While this degree of joining isn't an issue when the ESP8266 is utilized as an installed regulator chip in mass-created gadgets, it is a colossal weight for specialists,

programmers, or understudies who need to explore different avenues regarding it in their own IoT projects. Acquiring a page from the effective playbooks of a Raspberry Pi, the Node MCU project means to improve on ESP8266 advancement. It has two key parts. An open source ESP8266 firmware that is based on top of the chip maker's exclusive SDK. The firmware gives a basic programming climate dependent on eLua (implanted), which is a straightforward and quick scripting language with a set up engineer local area. For new comers, the Lua scripting language is not difficult to learn. A board that joins the ESP8266 chips on a standard circuit board. The board has an implicit USB port that is as of now wired up with the chip; equipment reset button, wifi reception apparatus, LED lights, and standard-sized GPIO (General Purpose Input Output) sticks that can plug into a bread board.

V EXPECTED OUTPUT

Figures shows the results This system collects the data from flow meter, the collected information stored in cloud storage. User can access the data at any time and any where. Using this Project we can easily identify the customers those who are crossed the limit of underground water. Figure 2,3,4,5,6. are show the Hardware components



Fig : 2 LCD Display



Fig: 3 Nodu Microcontroller

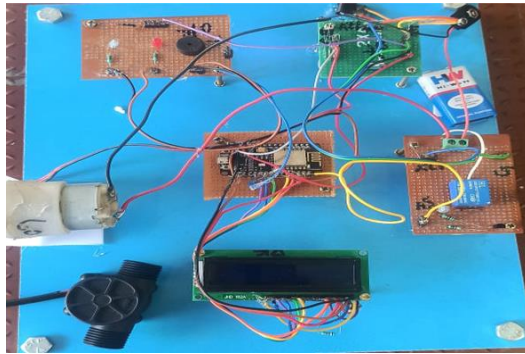


Fig: 4 Flow Meter

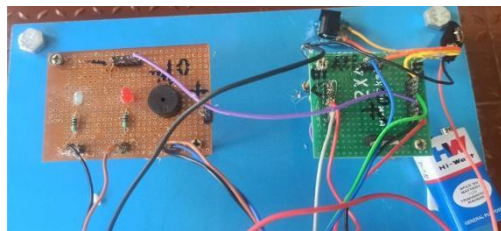


Fig : 5 Experimental Setup



Fig : 6 Buzzer and Voltage Regulator

The AC voltage, typically 220V RMS, is connected to a transformer, which steps that AC voltage down to the level of the desired DC output. A diode rectifier at that point gives a full-wave amended voltage that is at first sifted by a straightforward capacitor channel to create a DC voltage. This subsequent DC voltage for the most part has some wave or AC voltage variety. A controller circuit eliminates the waves and furthermore stays as before DC esteem regardless of whether the info DC voltage differs, or the heap associated with the yield DC voltage changes. This voltage guideline is generally acquired utilizing one of the mainstream voltage controller IC units.

VI CONCLUSION

The design and development of a low-cost system for real-time monitoring of water level and the flow of water measuring using flow meter sensor. The proposed system consists of sensor for water level monitoring and relay for controlling the water flow in the pipeline. These devices are low in cost, highly efficient and flexible. These are connected to node MCU wifi device. Finally, sensed values viewed and performed by the internet and also through mobile devices. If the water level is cross the limit the motor will be off through online application.

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