

Smart Watertap Control System

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Submitted: 15-07-2021

Revised: 29-07-2021

Accepted: 31-07-2021

ABSTRACT

As populace is expanding step by step, metropolitan neighborhoods have likewise expanded due to this reasons water has become a basic issue which influences the issue of water conveyance, water protection, water utilization and furthermore intruded on water supply. Individuals are found whining that they don't have adequate sum for their everyday needs, so to conquer water supply related issues and make framework proficient there is need of legitimate observing and controlling framework. In this paper, we present plan for water observing and control approach dependent on IOT which centers

on ceaseless and ongoing observing of water supply that empowers legitimate and uniform appropriation with the goal that we can have a record of accessible measure of water in tanks, stream rate irregularity in circulation line. This paper proposes the reasonable plan of shut circle computerized water dispersion framework for private structures. Here electronic stream rate sensors are fixed in the channel of each client, when the framework is turned on the measure of water used by every client is checked and constrained by utilizing miniature regulator by checking the beats from all channels ceaselessly. Depending upon the accessibility of water in the save tanks, the greatest measure of water which is the edge worth will be set for the individual clients. The valve can wind down on/off by the

focal control and handling unit to stop the water supply at whatever point the stream rate surpasses a predefined limit. There is a PC which is overseen in the framework to keep the track of the utilization of water by singular clients continuously and will be dealt with by the administrator to at the same time deal with the clients likewise.

Keywords: Internet of Things, water distribution system, electronic flow meter, closed water supply system, Arduino UNO, WiFi, water level sensor, solenoid valve.

I. INTRODUCTION

Water is one of the most necessary useful resource for all the livings on the earth. In that,

some human beings do now not obtain enough water due to the fact of unequal distribution.

So, it has to be provided exact as properly as cautiously and at right time to fulfill the day by day activities. The principal objective is to sketch and boost a low cost, reliable, worthwhile, and efficient method to make splendid water distribution by non-stop monitoring and additionally controlling it from central server so as to remedy water associated complications. This paper offers an concept to assist us to furnish water in a proper sequential order. In order to put into effect water distribution device in a fantastic, channelized manner to the quit users, the manage room of every person need to be provided with a micro controller to alter and manipulate the required extent of water in acceptable time interval. The electrically actuated solenoid valve will be shut down automatically when the restrict reaches the determined threshold value. With the assist of the inner predefined limit in the system, the float of water via the valve is controlled. The Wi-Fi module is used for wireless communication so that message can be sent to the admin in the central manipulate room

II. EXISTING SYSTEM

In the existing system, houses have almost no water supply. The valve is opened by the person in charge of the valve. The person must wait a while and then close the valve again. The system takes a long time to perform work that requires work. Even if the operator does not complete the proposed task perfectly, the task performance will be poor. In addition, people who own engines or other equipment can collect excess water for personal use. Therefore, many people do not have enough water to use them. They are independent tools and do not control consumption Water, so it works in an open circulation system.

III. LIMITATIONS OF THE EXISTING SYSTEM

The existing system has many limitations, such as:

- i). Ineffective monitoring
- ii). The user's lack of control over water use makes

it difficult to manage water resources in times of watershortage.

- iii). Although its consumption fluctuates.
- iv). Periodic manual intervention is required for maintenance, making it cumbersome and usuallyinefficient.

IV. PROVIDED SYSTEM

The proposed system is fully automated. This saves manpower and time. When water is supplied to each floor from the gas storage tank, the liquid level of the storage tank is monitored by the liquid level sensor, and a threshold value is set for each user according to the number of floors. Notify

the user to check the tank level that does not exceed the usage limit every 1 hour. If the new threshold is higher than the previous threshold, set and notify the updated threshold. The water supply maintains the same threshold. The user requests water from the management server according to the restrictions assigned to him. The management server works 24 hours a day. Open the valve for a specific user and discharge the water accordingly. The administrator manages the Web application, which consists of the following elements:

- i) The amount of water that each resident needs and consumes
- ii) Use a water flow sensor to measure the flow.

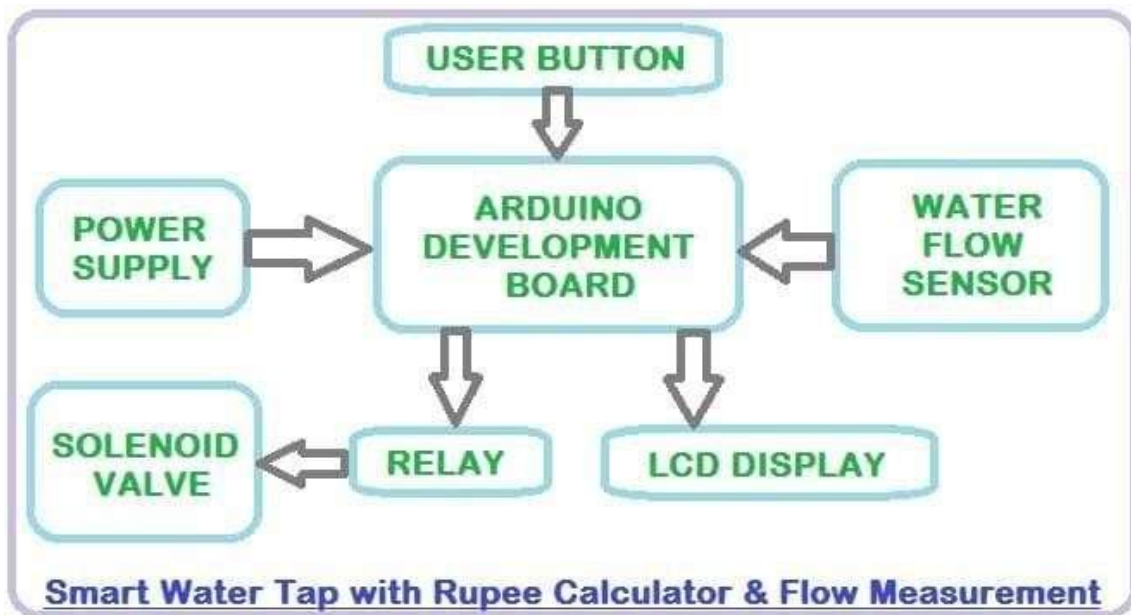


Fig. 1. Block diagram of proposed system

The flow sensor tracks the amount of water requested by the user to flow through each pipe and automatically closes the valve when the threshold is reached. When water is distributed, the flow rate is measured to ensure that the water is evenly distributed. All this data is sent via Wi-Fi. Go to the web page so that the system can be accessed from the computer. And water volume, both of which can be tracked from web pages that can be viewed anywhere on the Internet. Therefore, the proposed system helps to control the water supply based on the availability of i. Even under restricted conditions.

V. ADVANTAGES OF THE PROVIDED SYSTEM

The proposed system overcomes all the difficulties

of the existing system:

- i). Regardless of the pressure, it can ensure uniform distribution. Vibration in the pipeline.
- ii). Limit water consumption according to needs.
- iii). Adjust the water flow in real time.
- iv). Automatic water supply ensures that no water is wasted, thereby helping to save water. The system is equipped with a solenoid valve for water supply, so manual intervention is not required.

VI. FINAL RESULT

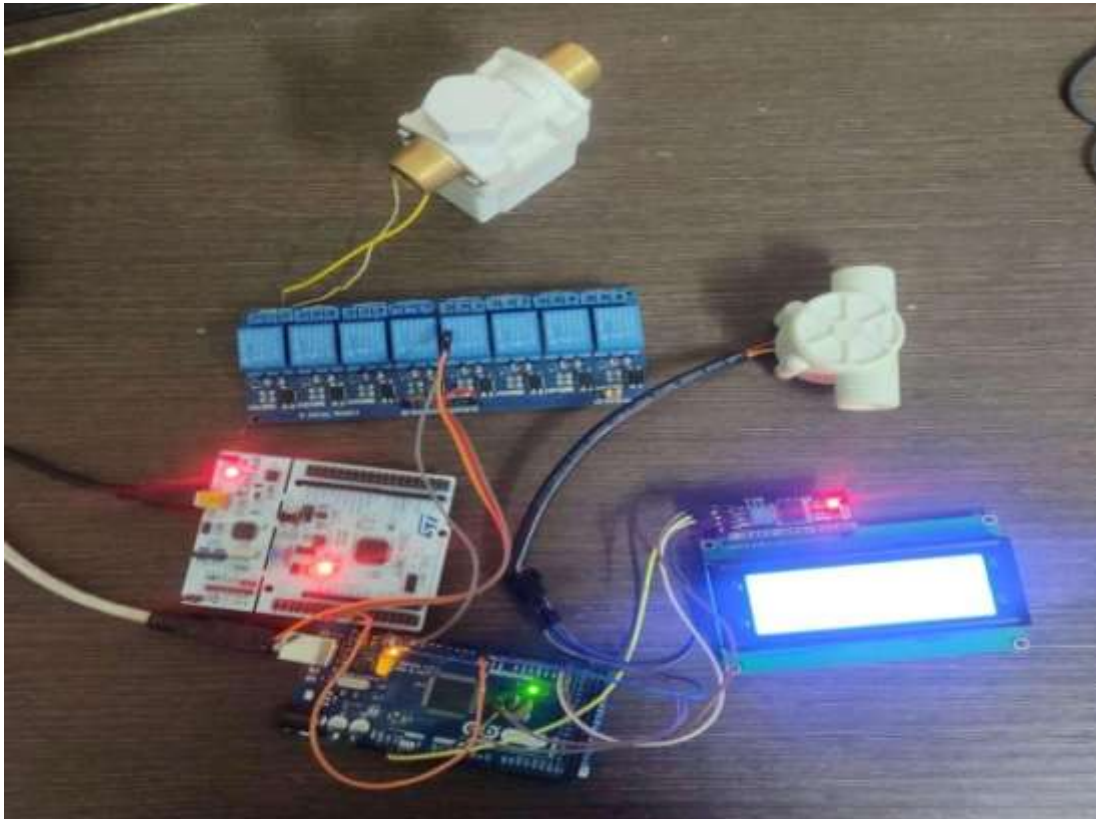


Fig 2. Final result of proposed system

When the predetermined limit is reached, the proposed system helps to track and control water consumption. The focus of automated water distribution is to provide sufficient water, no waste, efficient use, no overuse, and fair distribution. We try to design the system so that its components do not waste water, and the entire system runs automatically, so you don't need an expert to operate it. It is not that expensive. This design provides more space for research and future development. Although this is a project, we hope that some changes to the project will lead to reasonable multiple uses.

VII. CONCLUSION

The basic human need is water, which is one of the most important needs of all living things, but unfortunately, due to uncontrolled use and our negligence, a lot of water is wasted. Suggested so far, The basic human need is water, which is one of the most important needs of all living things, but unfortunately, due to uncontrolled use and our negligence, a lot of water is wasted. Suggested so far, but most methods have some limitations in practice. We are working hard to solve these

problems and introduce effective automatic water level control and monitoring systems. The main goal of this research is to create a flexible, economical and easy to configure system to solve the problem of water loss. It can use a mobile phone to control the system through the Internet from anywhere but most methods have some limitations in practice. We are working hard to solve these problems and introduce effective automatic water level control and monitoring systems. The main goal of this research is to create a flexible, economical and easy to configure system to solve the problem of water loss. It can use a mobile phone to control the system through the Internet from anywhere

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