



Water Level Observance App using Wireless Networks

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Abstract:

In Today's Era water dearth become crucial drawback in the world. By seeing that drawback we tend to develop an automated application which helps the human being to save the water and additionally to guard the Environment. The Water Level Monitoring Applications an Android and IOT based App. With the assistance of this App the end user will receive the current level of water stop overflowing of water from tank. We can also get the statistics report of the uses of the water. This App contain the Arduino Uno kit, Float Sensors, WI-FI Modem, Microprocessor, LED, 12 Volt Relay and Android Application which employed to display the amount of water and applied mathematics information of the water uses. In Android Application Bar chart is used to show the complete day statistics of water and pie chart is used to show the total amount of water present in water tank.

Keywords: Android Application, LED, WI-FI Modem, Microprocessor, Arduino Kit.

I. INTRODUCTION

Imagine true, after we activate the pump for filling the storage tank. However typically we tend to forgot to show off the pump because of this the quantitative relation of the water wastage is extremely high. To beat for this downside we tend to develop a system which will mechanically close up the pump once it get totally stuffed and conjointly develop the app to show the present level of water. Today's Era Technology becomes most significant part of the human life. Technology are group action in virtually each field like recreation, medicine, Social Interaction, Transportation and plenty a lot of. The building of the Pc and mobile phones helps to integrate this technology in existence. For connecting with this technologies web become most common Interface to change their life. New Trending technology cloud to store and manage our daily information. As wireless Phones is currently capable to figure as a laptop and conjointly connect with the net for communication with the folks and alternatives devices. By seeing these points, we have got developed wireless Phone Application to show water level and to store the water uses data. This Application helps you to induce the applied mathematics data of daily water uses.

II. OBJECTIVE

The objective of this Application is to avoid the wastage of water in urban areas and by shrewd. The statistics of water send this provide to the agricultural areas

III. RELATED WORK:

Water plays a crucial role in each day's life. In today's Era the web of factor (IOT) Technology is incredibly vital to develop the humanitarian project. During this s paper, we have a tendency to propose associate IOT based solution for water level observance system which might live this water level and statistics of the water within the cistern. As we all know that water plays an awfully vital role within the rural areas. Thus we have developed these Applications. This paper tells the

small print regarding however we have a tendency to Arduino to alter the house. The present system has the restriction as they'll use the Bluetooth device to send the information therefore it analyses to prove that the golem and Arduino has the higher combination. During this system the golem Application acts as a face. The microchip controls the sensor victimization the net. This paper describes the real time implementation and design of the wireless water level App. The present system may be manage manually that's the user will move to the water pump to begin and stop it. However the projected system will overcome this drawback. In the planned system all this operation will be done exploitation the Internet or Wireless Network, The microprocessor observe WI-FI Connection as soon as it detect the WIFI connection the water pump will start and stop automatically according to the Sensors values. In this paper we will observe the water level mistreatment the internet and this information are often hold on within the cloud platform. The planned system uses the cloud server to store the information for very long time. We will use this information for any purpose victimization this we will notice the statistics of the week or month or year. This paper describe that the water level observance App uses the Float sensor to live this current level of water. We tend to additionally produce the Android Application which is useful for the user to examine the statistics of water The App will be the user friendly. For the creation of this system we use the IOT technique because it is very secure and it can use easily to do the communication between Hardware and Software.

IV. SYSTEM FLOW:

Hardware Requirement:

1. Float Sensors:

This Sensor is used to check the level of water.

2. 2 Volt Relay:

This is used to control the flow of water pump.

3. LED:

It is used to show that the WI-FI device is connected successfully.

4. Microprocessor:

It is used to control the operation of various machines.

5. Arduino Kit:

This kit is used for connecting all the sensors, PCB etc.

6. WI-FI Modem:

It is used to send data to the server and it is also used to connecting with the mobile phone.

Software Requirement:

1. Android Studio :

It is the software which is used to create an Application for Smartphone's or the Android phone. We can use this software to create the Android Application for all the devices.

2. Arduino Software :

We use this software for writing the code of the hardware system. This can use the Embedded C Language for writing the code.

System Flow:

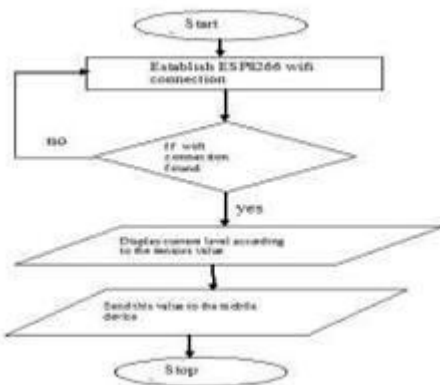


Figure.1. System Flowchart

Working:

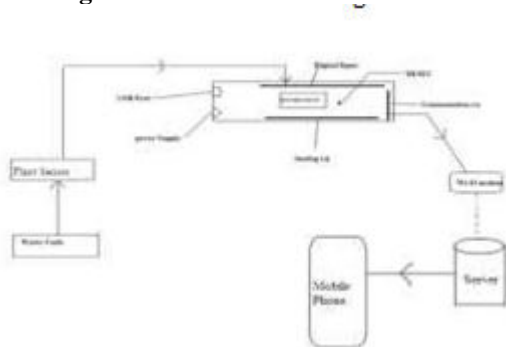


Figure. 2. Working System

Figure shows the working flow of the system. The primary step is to begin the Wi-Fi association. As before long we tend to begin the Wi-Fi association the Wi-Fi Electronic Equipment (*ESP8266*) that is attach with the arduino kit can sight the connections. If Wi-Fi association is detected than the water pump can begin mechanically. If the Wi-Fi association isn't detected than this method can perennial until the association was found. We have uses the two float sensors during this system. Initial is at level 50(*i.e. middle level*) and second is at level 100(*i.e. Full level*). In line with the tank height we will increases the amount of Float Sensors. We will additionally wish an Android smart phone (*greater than android 4.0 OS*) to point out the presence level of water once the association is

detected the water machine can begin to fill the cistern as presently because the level of water reaches to the sensor the sensor can detect the present level and the present level will show in Android App. As presently as tank get full the water pump will shut down mechanically mistreatment the WIFI association. This method is continuous once water level goes to LOW (*i.e. 0*). The Android App is employed to ascertain the present level of water and additionally statistics of the daily uses. This method will save the time of the user. This Application may be access from any location mistreatment WIFI association.

Observation / Result:



Figure. 3. Hardware Setup



Figure.4. Current Level of Water



Figure.5. Daily Usage (Represented in Bar Chart)

V. CONCLUSION

The Internet is capable of adjusting the human life. IOT has nice Potential to extend communication between smarter object. The aim of this project is very easy it will use to start out and stop water Pump mechanically victimization wireless local area network affiliation. Using this statistics we will save the water. This statistics can be used to send water in rural areas. The Android Application will show the present level as well as the statistics of water. The proposed system is very cost effective so it is a better way to monitor the Level of water. Further work involve that the statistics are often used for the general public welfare workplace victimization this statistics they can manage the availability of water in an exceedingly specific areas. This would save the Water which is useful for the grouping and surroundings.

VI. REFERENCES

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