Voice based Hot and Cold Water Dispenser and Display the Water Quality

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Abstract - *Technology is a never-ending process. To be able to design a product using the current technology that will be valuable to the lives of others is a huge contribution to the neighbourhood. Voice Based Water Dispenser Automation method using controller is the plan will be very useful for old age people and disabled people, basically one's who cannot achieve basic actions efficiently. It is the idea Corresponds to the new area of automation and technology. This presents the design and implementation of a low cost but flexible Secure voice based hot and cold-water dispenser system. The Between the cell phone and the controller board is wireless. Voice Command sends from mobile to the micro controller, to understand whether the water required by the person should be hot or cold. The Micro controller processes the information to the IR sensor to Determine where the glass is placed below the pipe or not. The method uses IR sensors to detect the presence of stream beaker and then the IR sensor sends the signal to the micro controller about the presence of the glass, accordingly the motor starts and the Water flows though the pipes from the particular jar (hot/cold).*

*Key Words***: IR sensor, Water glass, Micro controller, Blue-tooth.**

1. INTRODUCTION

Nowadays, we have remote control for our television set and previous electronic system, which Nowadays have made our lives really easy. Have you still wondered about house which would provide the resource of controlling lights, fans and other electrical appliances at home using a remote control Off-course, yes! But, are the available options cost 2 efficient. If the answer is No, we have found a solution to it. We have approach up with a new arrangement called voice-based automation using Blue-tooth. This method is super-cost effective and can give the client, the capability to control any electronic device without even spend for a remote control. This helps the user to control hot cold-water dispenser using his/her voice command to Smart phone. Time is a very valuable

thing. everyone wants to save time as much as they can unique technologies are being introduce to save our time. To save people's time we are introducing hot cold water dispenser system using Blue-tooth and display the water quality.

2. LITERATURE SURVEY

2.1 EXISTING SYSTEM

Here in this work the block diagram of the process of the classification of Automatic Water Dispenser is available. It consists of the follow major units: Sensors, Micro controllers, Display part, and Water fever. The diagram below shows the flow of in the system as well as their interoperability. When the water touches the sensor on a exacting level in the cistern than the voltage is transfer to the copper which is turn to the circuit for the further processing. while we are use the micro controller is the circuit the HIGH and LOW is feed into the micro controller which in turn uses this for Controlling of the water point. The yield of the water level is display on the LCD (Liquid Crystal Display) screen. The micro controller is programmed which is used to control the of whole system.

2.2 PROPOSED SYSTEM

In this, we present the theory on voice base warm and cold-water distributor system. The overall building block diagram of the future method is explained. Each and every block of the method is explained in detail. In this proposed block diagram consist of several sensors Water level, IR sensor, temp sensor) is connected to ARDUNI UNO controller. The controller are accessing the sensor values as well as get command from Blue-tooth module and Processing them to dispense hot or cold water. All parameters are also shown on LCD display. A solenoid regulator will be used to manage the flow of water, which is when energized the water will run out and when de-energized the water will be stopped up. So, we will write down a regulator program which always check if any objective is located near the valve, if yes then the solenoid will be turned on and wait till the object is separate, once

the object is apart the solenoid will turn off by design thus closing the supply of water.
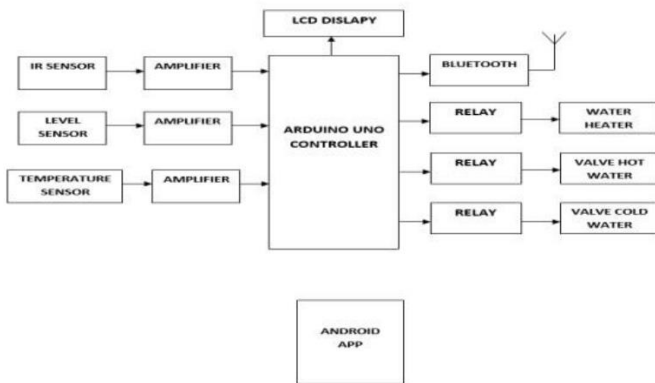
3. BLOCK DIAGRAM

Figure -1: Block diagram of voice based hot and cold water dispenser and display the water quality

4. COMPONENTS

4.1 Arduino Uno Controller

Arduino/Genuine Uno is a micro controller panel based on the ATmega328P. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz quartz crystal, a USB link, a manage jack, an ICSP header and a rearrange button. It contains the whole thing needed to maintain the micro-controller; merely attach it to a supercomputer with a USB cable or power it with an AC-to-DC adapter or battery to get Started. You can tinker with your UNO with no distressing too much about action something wrong, worst case situation you can replace the chip for a only some dollars and start ended again.

4.2 LCD display

A liquid crystal display (LCD) is a flat electric realistic display that customs the light controlling effects of liquid crystals (LCs). LCs do not produce light directly.

4.3 Temperature Sensor

A thermistor is a type of resistor whose conflict varies with high temperature. The phrase is a portmanteau of thermal and resistor. Thermostats are widely used as inrush current limiters, temperature sensors, self-resetting over current protector, and self-regulating heating elements. Thermostats vary from conflict temperature detectors (RTD) in the material used in a thermistor is frequently a ceramic or polymer, as RTD utilize pure metals. The temperature response is also different; RTD are useful over larger temperature ranges, while thermistors typically achieve a higher precision within a limited temperature range [usually −90 °C to 130 °C].

4.4 IR sensor

An Infra-Red sensor (IR sensor) is an electronic device that way infra-red (IR)light burning from things in its field of view. Apparent motion is detected when an infra-red source with one temperature, such as a human, passes in front of an Infra-red source with another temperature, such as a wall. All substance emits what is known as black body emission. It 5 is generally infra-red emission that is invisible to the human being eye but can be detect by electronic devices intended for such a purpose. "Infra" meaning below our capacity to sense it visually, and "Red" since this colour represent the lowest energy plane that our eyes can sense before it become invisible.

4.5 Relay

A relay is an electrically operated switch. Current flowing through the loop of the spread a magnetic field which attract a lever and changes the control contacts. The loop current can be on or off so relay have two control positions and they are double lob (change over) switches. Relays permit one circuit to switch a moment circuit which can be totally separate from the primary. For example, a small electrical energy battery circuit can use a relay to control a 230V AC mains circuit. There is no electrical link inside the relay linking the two circuits; the link is attractive and mechanical. The loop of a relay passes a relatively large current, classically 30mA for a 12V relay, but it can be as a large amount as 100mA for relays designed to operate from lower voltages. Most ICs (chips) cannot offer this current and a transistor is frequently used to amplify the small IC current to the well-built value required for the relay coil. The utmost output current for the popular 555 timer IC is 200mA so these strategies can supply relay coil directly without amplification.

4.6 Blue-tooth

Blue-tooth is an open wireless technology pattern for exchange data over short distances (using short wavelength radio transmissions) from set and mobile devices, creating personal area networks (PAN) with high levels of security. Created by telecom vendor Ericsson in

1994 it was initially conceived as a wireless alternative to RS-232 data cable. It can fix a number of devices, overcoming effort of synchronization. Today Blue-tooth is managed by the Blue-tooth unique Interest Group.

4.7 Water level sensor

Level sensors sense the level of substance that run, including liquids, slurries, granular equipment, and powders. All such substance flow to turn out to be essentially level in their containers (or other physical boundaries) for the reason that of gravity. The material to be precise can be inside a container or can be in its normal form (e.g. a river or a lake). The level size can be either constant or point values.constant level sensors compute level within a specific range and determine the exact amount of material in a certain place, as point-level sensors only point to whether the material is above or below the sensing point. Generally, the second sense levels that are extremely high or low. A drift switch is a device used to sense the level of fluid within a tank. The control may be used in a pump, pointer, an alarm, or other devices.

5. DISADVANTAGES

• The existing system only dispenser system.

• Water over flow not control.

6. CONCLUSION

The implementation of this project overall is successful. The motive of making the project cost efficient and user friendly is taken into account and achieved. The proposed system is created with the use of different sensors as controller and Blue-tooth module to get command from user smart phone. The system implementation is based on the ARDUINO UNO, which has been programmed to control a hot and cold-water dispenser valve based on sensor signals and on direct commands by the user. The system has been programmed to have Blue-tooth communication capability. Taking into consideration the target audience of elderly and handicapped people, the project developed is user friendly.

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