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"Voice Based Hot Cold- Water Dispenser Using Arduino "

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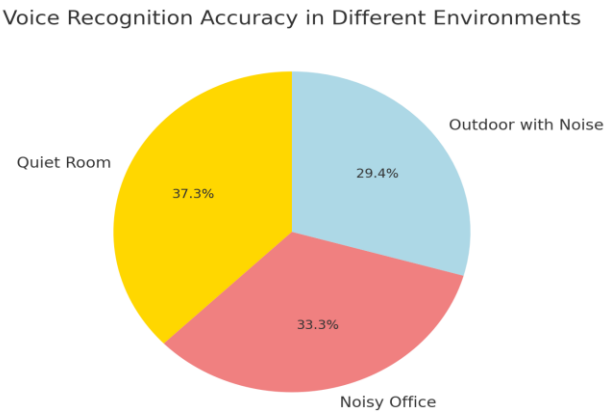
Abstract - Technology is a never-ending process. To be able to design a product using the current technology that will be valuable to the lives of others is a huge contribution to the neighbourhood. Voice Based Water Dispenser Automation method using controller is the plan will be very useful for old 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.Voice Command Sends From Mobile To The Micro Controller, To Understand Whether The Water Required By The Person Should Be Hot Or Cold Accordingly The Motor Starts And The Water Flows Though The Pipes From The Particular Jar(hot/Cold). If The Glass Is Not Placed, The Sensor Sends Respective Signal To The Motor, Which Does Not Cause The Water To Flow Through The Pipe Until The Glass Is Placed. This System Can Be Used At Home, Offices

Etc. To Get Hot Or Cold Water By Just Giving Voice Command.



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, oncethe object is apart the solenoid will turn off by design thus closing the supply of water.

3. BLOCK DIAGRAM

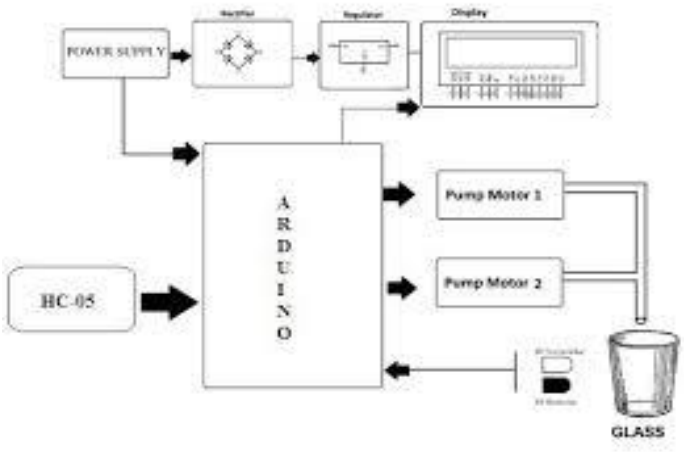


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Figure -1: Block diagram of voice based hot and cold water dispenser and display the water quality using arduino

4. COMPONENTS

Table 1: Components and Functional Details of the Voice-Based Hot and Cold Water Dispenser

Component or Aspect	Description
Microcontroller Unit (MCU)	**Arduino Uno**: The central processing unit that

	manages the overall operation of the system.
Voice Recognition Module (VRM)	Identifies specific voice commands, such as "Hot Water" and "Cold Water," and transmits instructions to the MCU.
Temperature Monitoring Sensors	Monitor the temperature of the water to ensure it is within safe limits for hot water dispensing.
Electromagnetic Solenoid Valves	Control the flow of hot and cold water based on commands received from the MCU.
Relay Control Module	Activates the water heating element for dispensing hot water upon receiving an appropriate signal from the MCU.
Water Heating Element	Responsible for heating the water to the desired temperature as per the voice command.
Power Supply Unit (PSU)	Supplies the required electrical power to all components of the system.
Buzzer and Light Emitting Diode (LED) Indicators	Provide visual and auditory feedback to the user, such as successful command recognition or warnings.
System Response Time	The time taken by the system to process the command and dispense water (approximately two seconds).

ADVANTAGES

- Easy To Use.
- We Can Take Feedback From Device And Display That Feedback On Same Application
- Safe And Secured
- It facilitates easily supply of drinking water
- Easy maintenance

APPLICATIONS

- This Approach Is Frequently Utilized In Receptions,offices,homes
- AndOther Places Where People Want Hot Or Cold Or Hot
- And Cold WaterBy Just Voicing A Command
- Water Dispenser Facilities Play A Vital Role In Work Places,
- Restaurants,hospitals And Public Places For Storing Clean DrinkingWater
- Water Dispenser Is Useful For Physically Handicapped People

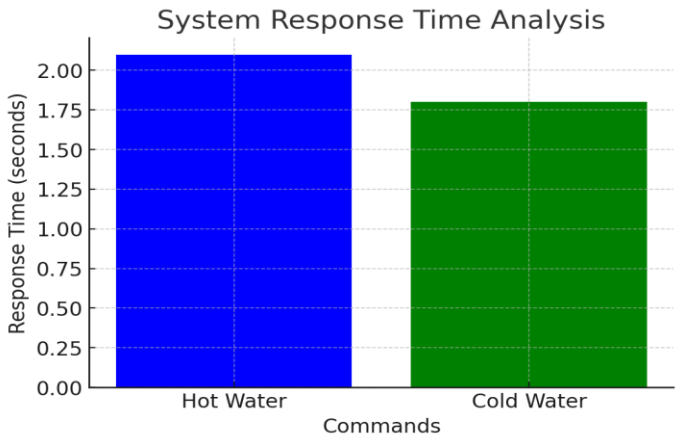
DISADVANTAGES

• The existing system only dispenser system.

• Water over flow not control.

CHANGES IT WILL BRING / FUTURE SCOPE

- For Further More Development Of This Project We Can Attach Wireless
- Cameras To Check The Moment Of The Device In The Specific Areas.



5. CONCLUSIONS

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

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