Hot and Cold water dispenser using Bluetooth

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Abstract: **The Arduino Voice Controlled Hot and Cold Water Dispenser is a smart device that can be controlled by voice commands without the need for manual controls. The system can be used in homes, offices and other places where hot or cold water is needed. Here are some of the components and functions of the Arduino voice controlled hot and cold water system.**

***Keywords*— Water, Arduino, Bluetooth, Voice.**

1. INTRODUCTION

The system is based on human voice commands. Th e water dispenser consists of Arduino UNO, infrared sensor, water tank, water pipe and motor. In this pr oject, the sound is detected by a Bluetooth module, a nd then the sensor sends the corresponding data to th e microcontroller. The above statement is valid for p eople who cannot perform their basic tasks. This ide a fits very well with the new era of automation and t echnology.

2. LITERATURE SURVEY

1) A voice-controlled water dispenser that uses an Arduino Uno. It's an improved version of the 89S52 model, and it's designed to be more user-friendly. The system uses an IR sensor to detect containers and prevent overflow, which helps save water.
2) Voice based Hot and Cold-Water Dispenser and Display the Water Quality voice-based water dispenser system that uses an Arduino Uno controller, sensors, and a solenoid. The system also has an LCD display that shows all the parameters.
3) The system is designed to be low-cost, flexible, and secure. It's also intended to be useful for people who have difficulty performing basic tasks.
4) voice-based water dispenser system that uses a Raspberry Pi circuit, an IR sensor, a voice app, and. The system uses the voice app to detect speech and determine whether the user wants hot or cold water. The IR sensor then detects when a glass is placed under the pipe, and sends a signal to the Raspberry Pi to dispense water.

3. PROBLEM DEFINITION / STATEMENT

During the COVID-
19 pandemic, we cannot touch tap water because it c an spread the disease. However, these functions allo w it to work on the speaker, so there is no need to to uch the tap. The project also benefits disabled citize ns. The elderly and disabled usually refer to people who cannot perform simple tasks

4. OBJECTIVE(S)

The main objectives are:
1. The proposed system use simple basic Arduino, hence it reduce cost to make the product affordable.
2. This System can be used at home, Office, etc. by giving voice command.

5. PROPOSED METHODOLOGY

In this article we present the theory of hot and cold water processes. The general construction of the future process is described. Each obstacle is clearly explained. In this diagram, multiple water meters are connected to the Arduino Uno controller. The controller then accesses the measured values and activates the commands from the Bluetooth module to provide hot or cold water. Solenoid valves will be used to control the water flow. When the power is on, the water will flow, and when the power is off, the water will be blocked. In other words, if it is close to the target value, we will write a control that will open the solenoid value and wait for the object to be removed.

6. RESOURCES & CONSUMABLES REQUIRED

- Software:
  - Arduino Uno

- Proteus

❖ Hardware:
- Bluetooth Module
- Power supply
- Arduino Uno
- Relay
- Solenoid valve
- Heater
- Cooler
- Water tank

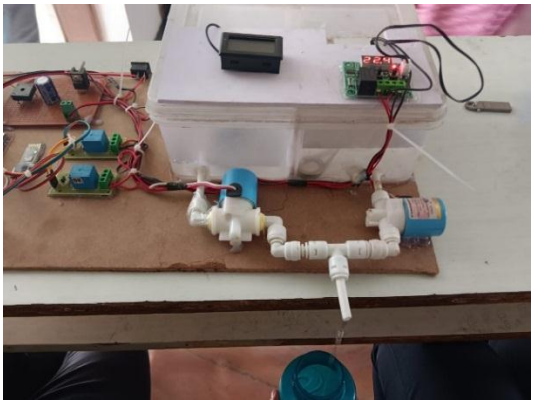
7. DESCRIPTION

In this project the voice is detected by the Bluetooth Module, then the sensor sends the respective information to the Arduino Uno. Hot and cold-water dispensers connect to a water tank and are designed to provide convenient access to hot or cold water, depending on the preference. These machines are equipped with both Heating and Cooling elements. A heating element that warms the water to the desired temperature and a refrigeration system that cools water it as needed.
From instant hot water dispensers to cold mains-fed water dispensers, to one that does it all, knowing how they work in the office, building site or other e nvironments, is useful to know. By providing a reliable source of hot and cold water , the se machines help to promote healthy hydration habits, which are essential for maintaining good health

In this., we present the theory on base warm and cold-water distribution system. The overall building block diagram of the future methods is explained. Each and every block of the method is explained in details. In this proposed block Diagram consist of several sensor water level is connected to Arduino Uno controller.

The controller is accessing the sensor values as well as get command from Bluetooth Module and processing them to dispense hot or cold water. Solenoid all will be used to manage the flow of water. Which is energized the water will run out and when the water be stopped up. So we will write down a regulator program which always check if any objective is located near the value if yes then the solenoid value will be turned on and wait the object is separate.

8. RESULT



9. FUTURE SCOPE & APPLICATION

➢ Feature scope

The proposed system is such that it can overcome the drawback of the existing system which suffer from the drawback that only predefined voice are possible and it can store only limited voice. Hence, the user can't get the full information coherent. The project design involve text to speech. Here whatever the system receives as input after the command analysis and decoded it and the required outcome is obtained. In future improving the cooling mechanism for efficient cooling at lower cost can be the main focus. there are several improvement opportunities that can be feature improve the performance and reduce the power consumption of the sub-system.

➢ Applications

1) Size they making easy and storing and are usually portable
2) With so many different types of water dispenser on the market you can choose one that suits yours need and budget
3) There is minimal installation
4) Cleanup is very simple

➢ Advantages

1) Clean Water. You have the option of loading a bottle of clean and purified water on the water dispenser and make it easier for you and your family to access clean water whenever they want.
2) Easy to Use. ...
3) Safety for Children. ...
4) Easy Maintenance. ...
5) Cost-Effectiveness

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