Voice Controlled Dispenser

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Abstract : The development of technology never stops. Designing a product with the help of modern technology that will improve the lives of others is a significant contribution to the neighborhood. The idea of voice-based cold drink dispenser automation using a controller will be very beneficial for regular people as well as for every industry, including restaurants and businesses. It is the notion. in line with the emerging field of automation and technology. This describes the development of a secure voice based cold drink dispenser system that is both affordable and versatile. Wireless communication exists between the controller board and the cell phone.

***Index Terms*- Voice Dispenser, Bluetooth, water, pump, C, Arduino , smartphone , Host control**

I. INTRODUCTION

Voice-controlled Bluetooth dispensers represent an innovative leap in home automation technology, offering a cost-effective solution to streamline everyday tasks. With the advent of remote controls for various electronic devices, the convenience factor has become increasingly paramount in modern households. However, traditional remote-controlled systems may come with their own set of limitations, including cost barriers and compatibility issues. Recognizing these challenges, the development of voice-based automation using Bluetooth emerges as a game-changer, promising enhanced accessibility and affordability for users.

The essence of this system lies in its simplicity and efficiency. By leveraging the power of voice commands, users can effortlessly control electronic appliances such as tube lights, fans, and even water dispensers with just the sound of their voice. Unlike conventional remote controls that require separate devices and often incur additional costs, the voice-based Bluetooth automation system utilizes existing smartphone technology, eliminating the need for extra hardware investments. This not only reduces financial burdens but also enhances user convenience by integrating seamlessly into everyday devices.

Moreover, the incorporation of Raspberry Pi as the central control unit further enhances the versatility and functionality of the system. Raspberry Pi's compatibility with various peripherals and its capability to execute complex tasks make it an ideal choice for powering smart home automation projects. By harnessing the Bluetooth module's wireless connectivity, users can issue commands to the Raspberry Pi from their smartphones, enabling intuitive control over connected appliances. Whether it's dispensing hot or cold water or adjusting room temperature, the possibilities for automation are virtually limitless, offering users newfound freedom and efficiency in managing their home environments.

In essence, voice-controlled Bluetooth dispensers represent a significant step forward in the evolution of home automation technology. By marrying the convenience of voice commands with the ubiquity of smartphone connectivity and the versatility of Raspberry Pi, this innovative solution empowers users to enhance their living spaces with minimal cost and effort. As time becomes an increasingly precious commodity in today's fast-paced world, embracing new technologies like voice-based automation not only saves time but also opens doors to a more seamless and enjoyable living experience.

VOICE CONTROLLED DISPENSER

1. Architecture

1.1 ARDUINO:

Arduino is an open-source electronic platform based on easy-to-use hardware and software. The Arduino board can read an input (light from a sensor, a finger on a button, or a Twitter message) and convert it to an output to run a motor, turn on an LED, or post

something online. get a raise. You can tell the board what to do by sending a series of instructions to the board's micro-controller. To do this, we use the Arduino programming language (wire-based) and the Arduino software (IDE) processing.

1.2 BLUETOOTH HC-05:

Bluetooth wireless technology is becoming a popular standard for communication. This is one of the fastest growing areas in wireless technology. It's convenient, easy to use, and has the bandwidth to meet most of today's mobile and personal communication needs. Bluetooth technology handles the wireless portion of the communication channel. Send and receive data wireless between these devices. Provides received data and receives data to and from the host system through the Host Controller Interface (HCI).

1.3 MICRO SUBMERSIBLE MINI WATER PUMP:

Micro DC 3-6V Micro Submersible Pump Mini Water Pump for Fountain Garden Mini Water Circulation System DIY Project. A low-cost, compact submersible pump motor that operates on a 3-6V power supply. With a very low power consumption of 220mA, it can absorb up to 120liters per hour. Simply connect the tube to the motor output, submerge it in water and switch it on. Make sure the water level is always higher than the engine. Dry running can heat up the motor, damage it, and cause noise.

2. Problem statement, Objective, Scope, Working

2.1 Problem Statement

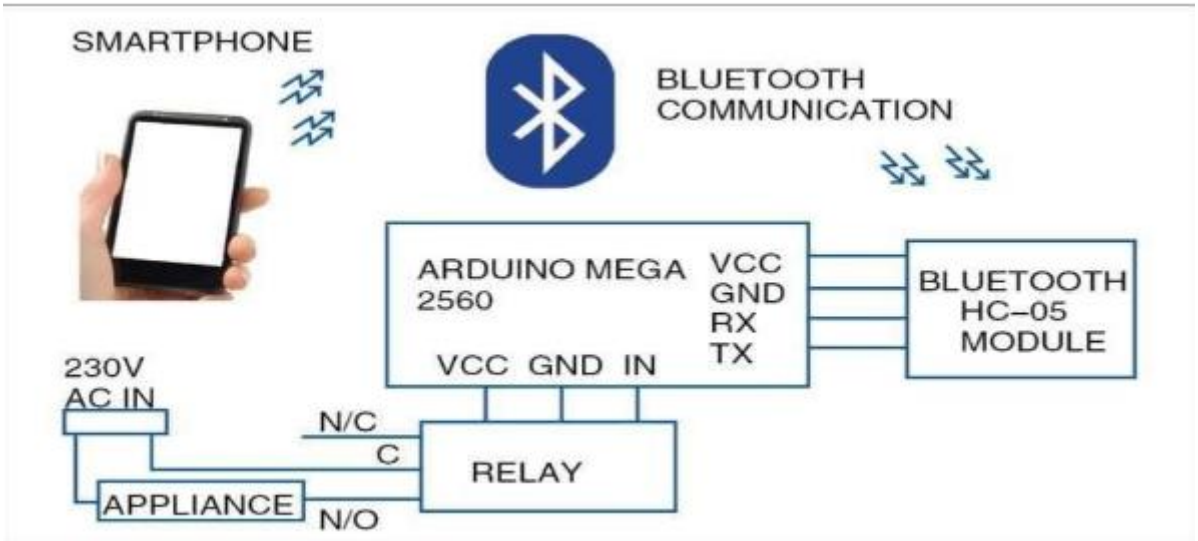
As we see in this pandemic people keeps their safety first so they fear to get in the touch withanything.so we focused that problem and try to make something new like voice command dispenser A cold drink dispenser is, as its name implies, a device that dispenser cold drink It is used to provide easy access to drinking cold drinks. Cold drinks dispensers have become a necessary part of society. A cold drink dispenser can be useful in many situations. Some offices prefer to have cold drink.

2.2 Objective

1. Use voice commands to reduce human effort, effort and time.
2. Too useful for ordinary people. People can use the system to get cold drinks with voice commands like Sprite or Coco Cola.
3. It is a system that can be used by people who cannot efficiently perform basic operations such as hotels.

2.3 Scope

1. Affordable, requires few components, and is easy to use
2. It is a real-time multi-function device
3. Helps improve productivity in many companies



2.4 Working of project using bluetooth HC-05

3. Conclusion

The implementation of this project has successfully realized its objectives of cost efficiency and user-friendliness. Through the integration of Arduino Uno and various sensors, coupled with Bluetooth communication capabilities, the system effectively responds to voice commands from users' smartphones. This thoughtful design approach, tailored to accommodate elderly and handicapped individuals, underscores its user-centric nature, ensuring accessibility and ease of operation.

With its automated functionality and minimal power consumption, the system offers both environmental and practical benefits. Users can enjoy quick and efficient dispensing of water or cold drinks within seconds of issuing voice commands, thereby minimizing waste and maximizing convenience. This project represents a significant advancement in home automation technology, showcasing the potential to enhance everyday tasks while prioritizing user needs and resource efficiency.

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