

VOICE CONTROL HOME AUTOMATION USING ARDUINO

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Abstract – Mechanization includes forms within the 21st century and assumes a basic portion in our regular lives. The fundamental interests required in robotized frameworks are human work, effort, time and decrease botches because of human carelessness. With the progression of showdayinnovation, PDAs have turned into a need for each person on this planet. In our wonder, clients in their domestic will control diverse domestic machines utilizing PDAs. The inherent program open within the android advertise is utilized to control the contraptions interior the domestic. This will make utilization of contraptions like AC and control hardware for the planning of different remote association between the advanced versatile phone and home machines utilizing Bluetooth module. All the client needs is an Android phone and control scheme that can be seen by just about anyone. Arduino Uno microcontroller and control circuitry for controlling client orders and trading devices. Bluetooth telephony between microcontrollers and extensive use of inaccessible technology to exchange information in a variety of ways.

Keyword:

Home Computerization, Voice acknowledgment, Android, Bluetooth, Arduino ,Voice control.

Introduction:

The main purpose of the action is to increase productivity and reduce load. "Networks of Objects" As the last decade draws to a close, we are pushing out the inevitable in every possible way. This is especially important for human-machine interface development. On-site work is in progress for computerization and other easy installation. That is why voice controlled home automation systems (VHAS) are proposed to achieve the goal of convenience by continuing computerization.

Description:

Controlling a device with a keyboard or remote control is a very old concept in voice use. The goal of this project is to improve lighting, fans, air conditioning and other controls using the human voice. People with disabilities work on machines that are not at home. This application is useful for disabled/weak people. They know how to control machines using their voices. It can also be used to control handheld devices by checking a checkbox after changing the pattern, just to be sure, or connecting the camera remotely. Some foods are dangerous. If you are interested in creating workflows in architecture, especially materials. Especially if you are interested in home automation frameworks in the mobile design of your device.

This process is designed to use three elements. The first one is an Arduino Uno, the second is an HC-05 Bluetooth module, and the third is a relay. First, the user controls the Arduino UNO through the HC-05 Bluetooth module using the smartphone's voice recognition function and application software. The

microcontroller operates according to commands given by the user and controls the functions of the relays. Arduino is programmed using the Arduino IDE software. The implementation of the user interface is an Arduino volume control. As you can see on the map, a home automation system or voice control is what we call home automation.

Block Diagram:

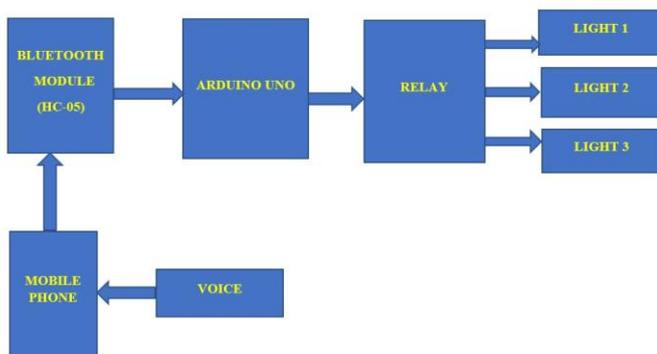


Fig. 1

Applications and benefits:

The volume control has many uses, some of which are listed below.

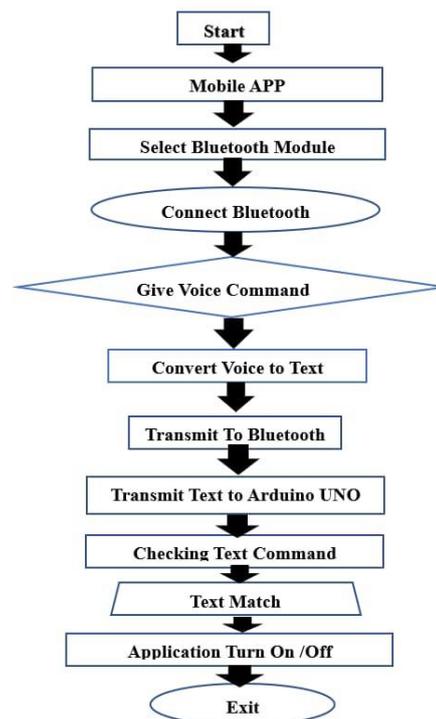
- 1) This product is for household use only.
- 2) It can also be used in a business context.
- 3) The main purpose of application is the disabled and the elderly.
- 4) Energy loss can be reduced and the use of domestic robots requires less effort than conventional strategies.
- 5) Infrared, RF, In-App, Arduino, Bluetooth, DTMF, etc. The robot frame improves performance and ensures ease of use.

6) Health weakness when supplying energy using power distribution.

7) Enhance security with home automation systems, computerized door locks and surveillance cameras.

8) With a technology base at home, you can spend more time at home and use your devices anytime, anywhere. (You don't have to go home from the office, just open the front door of your relative's house) Interesting point of home appliance learning: Easy to learn and easy to use

Flowchart:



Conclusion:

Remember that home automation using Arduino is a win. This framework includes Arduino-Uno board, bluetooth module, mobile phone, control home appliances, appliances and Android app. Money is easy to understand and know. It can also be considered that the objectives of the project have been successfully achieved.

Reference:

[1] "Smart Home Automation," [Online]. Available: <https://www.cleverism.com/smart-homeintelligent-home-automation/>.

[2] D. C. HANSON, "Android Application Development and Implementation 3 Dimensional," 2010.

[3] M. M. S. N. a. M. S. Deepali Javale, "International Journal of Electronics Communication and Computer Technology (IJECCCT)," March 2013

[4] [Online]. Available : <http://arduino.cc/en/Guide/Introduction>.

[5] ", Bluetooth,," in *Inigo Puy*, 2008..

[6] [Online]. Available: <http://www.bluetooth.com/Pages/Fast-Facts.aspx>.

[7] Ming Yan and Hao Shi, "SMART LIVING USING BLUETOOTH BASED ANDROID," 2013.

[8] *HC-06 Bluetooth module instructional manual..*

[9] J. LIU, "Research on Development of Android Applications. Fourth International," 2011.

[10] LOXONE, " Miniserver based Smart Homes,,"2015.