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## Voice controlled home automation system

Reshma Uttam Shinde

[reshmashinde@orchidengg.ac.in](mailto:reshmashinde@orchidengg.ac.in)

Nagesh Karajagi Orchid College of Engineering and Technology,  
Solapur, Maharashtra

### ABSTRACT

*The concept of Home Automation is gaining popularity as it helps in reducing human effort and errors and thus increasing the efficiency. With the help of Home Automation system, we can control different appliances like lights, fans, TV, AC etc.*

*Home automation already in practice is by switching on or off a device via wired networks. But this is inefficient for people with an impairment in mobility or any physical disability due to aging factors. Existing products are expensive and also speech recognition is available with the usage of internet (online).*

*This is a project for a voice-controlled home automation system to control appliances with your voice through an Android app. This system is especially beneficial in case of handicapped or aged people who find it difficult to walk and operate the electrical switches to turn on or off the loads. All these loads can be individually turned on/off. This system solves the issue by interfacing a unit with home appliances that switch these loads based on the input received from the android device. The Android app also provides an effective GUI for providing this functionality to the user of the automation system.*

**Keywords:** Bluetooth, Micro-controller, IR system.

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### 1. INTRODUCTION

The concept of Home Automation is gaining popularity as it helps in reducing human effort and errors and thus increasing the efficiency. With the help of Home Automation system, we can control different appliances like lights, fans, TV, AC etc.

Home automation already in practice is by switching on or off a device via wired networks. But this is inefficient for people with an impairment in mobility or any physical disability due to aging factors. Existing products are expensive and also speech recognition is available with the usage of internet (online).

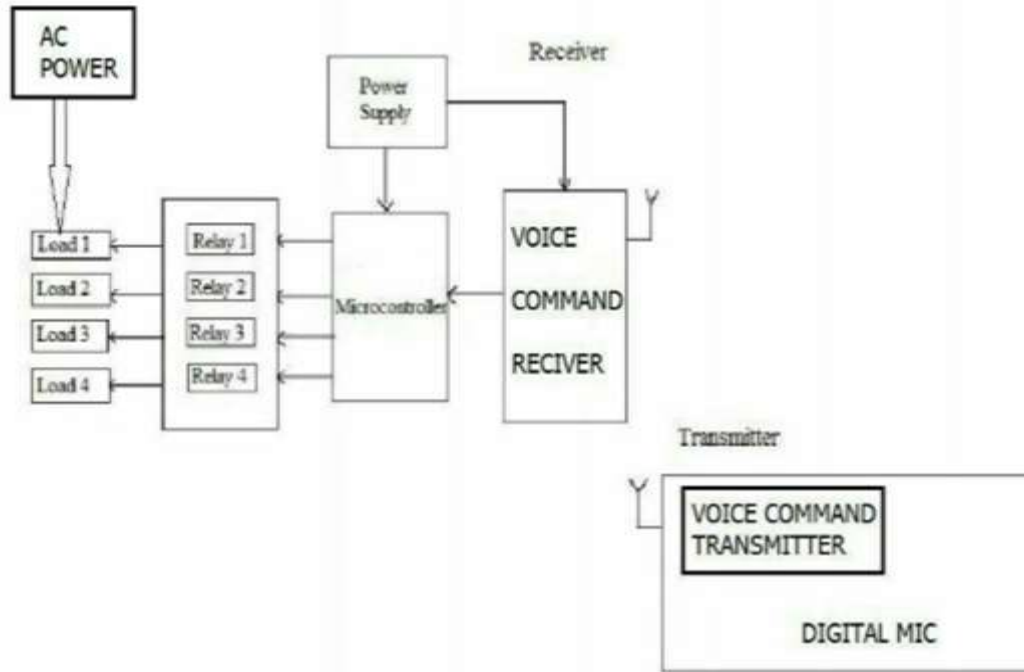
There are many types of Home Automation Systems like Bluetooth Controlled, Internet Controlled, Remote Controlled (IR Remote) etc. In this project, we have designed a Voice Controlled Home Automation system using Bluetooth network model, where different appliances are controlled by sending a Voice Command.

This is a project for a voice-controlled home automation system to control appliances with your voice through an Android app. This system is especially beneficial in case of handicapped or aged people who find it difficult to walk and operate the electrical switches to turn on or off the loads. All these loads can be individually turned on/off. This system solves the issue by interfacing a unit with home appliances that switches these loads based on the input received from android device. The Android app also provides an effective GUI for providing this functionality to the user of the automation system.

#### 1.1 Advantages:

- The main Advantage of these application is for physically handicap people and elderly people. This kind of system is very useful for people with disabilities.
- The Voice Activated Home Automation system will help us control different loads (electrical appliances) with simple voice commands.
- Using the Bluetooth module, use the system from anyplace is easier without any internet data usage.

## 1.2 System Architecture



**Figure: 4.1 Overall System Architecture of Proposed System**

There are two systems that is Transmitter system and Receiver system. In Transmitter system we receive the voice from human as voice command using digital mic of smart phone. In Receiver system's voice command receiver receives the voice as text message using Bluetooth network and transmit to Microcontroller. In Microcontroller the text message is matched against the various commands present in the code, to switch the appliances on/off. In this project the relay circuit is used to turn the appliances on/off.

## 2. CONCLUSION

The Voice Activated Home Automation system will help us control different loads (electrical appliances) with simple voice commands.

This kind of system is very useful for people with disabilities.

Using this project we can control all the loads using a single remote and a control unit.

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