VOICE CONTROL HOME AUTOMATION USING BLUETOOTH

ABSTRACT

Automation plays a key role in human life. Home automation allows us to control household electrical appliances like light, door, fan, AC etc. It also provides home security and emergency system to be activated. Home automation not only refers to reduce human efforts but also energy efficiency and time saving. The main objective of home automation and security is to help handicapped and old aged people who will enable them to control home appliances and alert them in critical situations. This project put forwards the implementation of home automation and security system using Arduino microprocessor and Android smartphone. Home appliances are connected to the microprocessor and communication is established between the Arduino and Android mobile device or tablet via Bluetooth module. We would develop an authentication to the system for authorized person to access home appliances. The device with low cost and scalable to less modification to the core is much important. It presents the design and implementation of automation system that can monitor and control home appliances via android phone or tablet. This system to control home appliances uses a voice controlled android application. By the increasing use of PC (personal computers), internet, mobile phone and wireless technology, it makes it easy for a user to remotely access and control the appliances. our system is a computer based system that can accept voice to direct commands and process them. The system provides us switching any device ON/OFF. The 16x2 character LCD is display the status.

BLOCK DIAGRAM

```
┌─────────────────────────────────────────────────────────────┐
│                      POWER SUPPLY                            │
│  ┌──────────────┐    ┌──────────────┐    ┌──────────────┐   │
│  │ TRANSFORMER  │    │  RECTIFIER   │    │  REGULATOR   │   │
│  │              │    │      &       │    │              │   │
│  │              │    │   FILTER     │    │              │   │
│  └──────────────┘    └──────────────┘    └──────────────┘   │
└─────────────────────────────────────────────────────────────┘

┌──────────────┐
│   MOBILE     │
│   PHONE      │                    ┌──────────────┐
└──────────────┘                    │              │
                                    │              │
          ┌──────────────┐          │   ARDUINO    │
          │  BLUETOOTH   │ ───────> │              │
          └──────────────┘          │              │
                                    └──────────────┘
                                           │
                                    ┌──────────────┐
                                    │    RELAY     │
                                    │   DRIVER     │
                                    └──────────────┘

┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
│ RELAY 1  │  │ RELAY 2  │  │ RELAY 1  │  │ RELAY 2  │
└──────────┘  └──────────┘  └──────────┘  └──────────┘
```