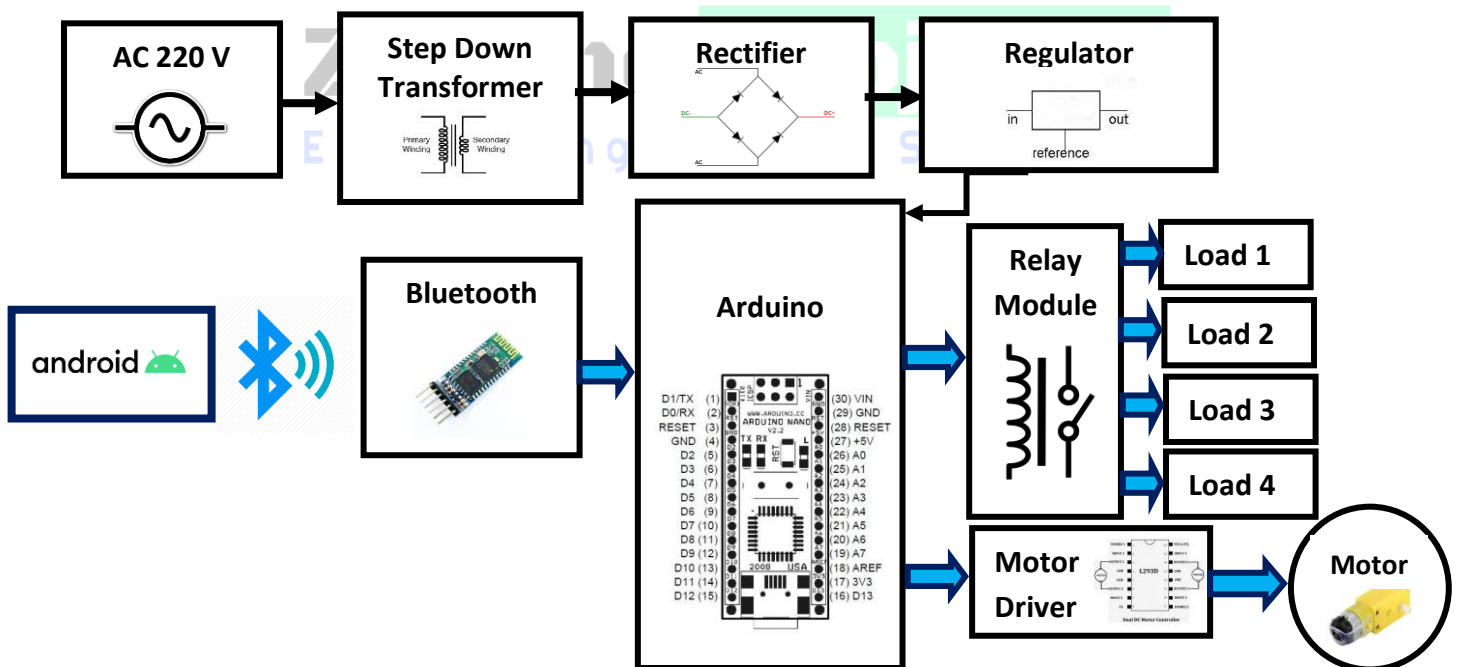# Android Control Door Security and Home Automation.

About This Project:

In This project is to make an Android Control Door Security & Home Automation. This Project includes two distinct parts, hardware control circuit and the android application. The communication between the Control circuit and the android application is carried over by the Bluetooth link between the phone's Bluetooth and the Bluetooth device in the control circuit. The ASCII commands are sent from the phone to the Robot which in turn checked by the Arduino for the turning ON or OFF of the particular device. This project helps to control the electrical loads with the help of android application. The electrical loads are controlled based on Bluetooth input signal. This input signal is received from the android device. The android device may be any android based phone or tab having an android OS. The app also provides an effective GUI for providing this functionality. An Arduino is used in this system. The Bluetooth receiver is interfaced with microcontroller in order to accept the commands and then react accordingly. It operates the loads through a set of relays using a relay module. Relays are used between loads and the control unit. This system proves to be very beneficial for controlling various domestic applications and in industrial setups. Another function of this project door security systems. This smart lock is the secure, simple, and easy to manage the home's lock. This lock needs no keys and the lock is attached inside the door and you can control it from outside the door using Bluetooth. As the lock is inside the door there is no way to break the door by a thief. An android application is required to open and close the lock. The power supply setup of the system contains a step down transformer of 230/12V, used to step down the voltage to 12VAC. To convert it to DC, a bridge rectifier is used. In order to remove the ripples, a capacitive filter is used and it makes use of 7805 voltage regulator to regulate it to +5V that will be needed for microcontroller and other components operation.

Block Diagram:

Figure: Block Diagram of Android Control Door Security and Home Automation.

Required Instrument:

- Arduino.
- Bluetooth Module.
- Gear Motor.
- Relay.
- Motor Driver IC L293D.
- Transformer.
- Bridge Rectifier. /Diode.
- Voltage Regulator.
- Capacitor.
- Resistor.

Advantages:

- Provides safety/Security from electrical power short circuits while using conventional wall switches to operate loads.
- Home automation system Provides many facilitates & more security.
- Save a lot of time to operate from remotely without wasting time.
- Fan, Door Lock, Light, & Switch can be operated.
- Prevents wastage of energy.
- No need to carry separate remote or any other controlling unit.

Applications:

- This project can be used to control various Home Appliances.

- This Project can be widely used for more security such as office, Home, Shopping mall, industries etc.

N.B: *Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.*

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