CAMBRIDGE INSTITUTE OF TECHNOLOGY

K.R PURAM, BANGALORE - 560 036

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INTUIT – 2019- (Technology Manifested)

THEME BASED MINIPROJECTS
SYNOPSIS

TITLE: HOME AUTOMATION

THEME: IoT

TEAM MEMBERS: PROJECT CO-ORDINATOR/GUIDE

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Department of ECE

INTUIT – 2019- (Technology Manifested)

TITLE:

HOME AUTOMATION

PREAMBLE:

The **home automation** device that you build can be integrated **with** almost all the**home** appliances and can be used to control them remotely from any part of the world. To facilitate the wireless connectivity **with** the system, the **Arduino** Uno will be embedded **with** a WiFi module.

OBJECTIVE:

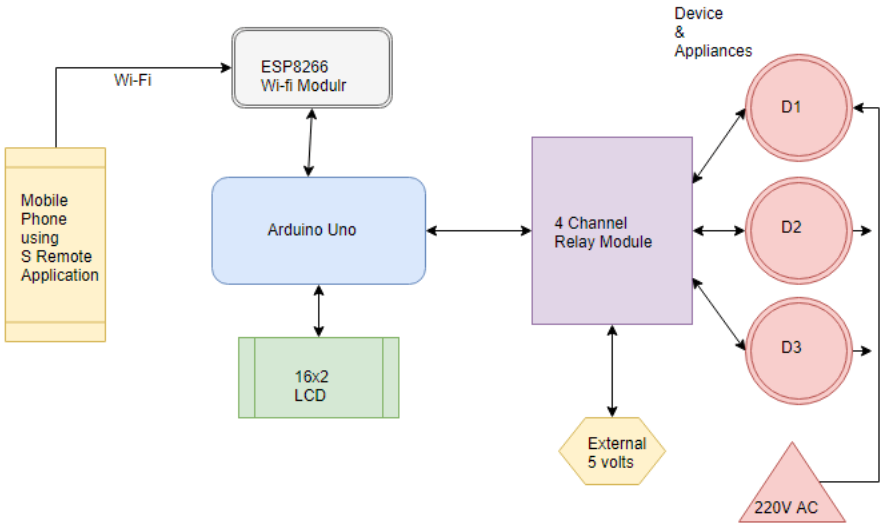
In this project we are going to make a home automation system using ESP8266 WiFi module and Arduino Uno. Using this we will be able to control lights, electric fan and other home appliances through a web browser using your PC or mobile. These AC mains appliances will be connected to relays which are controlled by the Arduino. ESP8266 and Arduino together acts as a Web Server and we will send control commands through a Web Browser like Google Chrome or Mozilla Firefox.

BRIEF DESCRIPTION OF THE PROJECT:

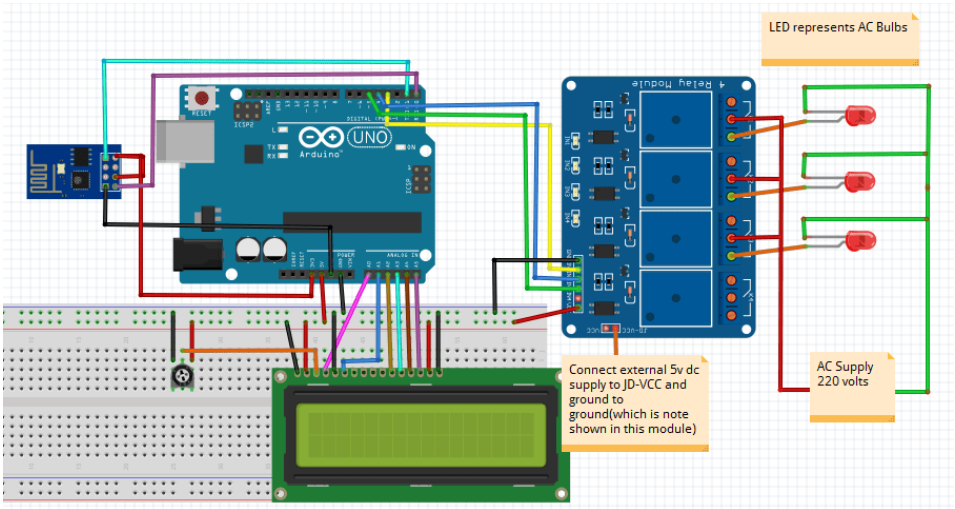
(Using flowchart / block diagram)

To facilitate the wireless connectivity with the system, the Arduino Uno will be embedded with a WiFi module. This establishes the internet connection to the system and all the home appliances can in turn be connected and controlled by internet.

BLOCK DIAGRAM :



CIRCUIT DIAGRAM :



COMPONENTS / MATERIALS USED:

- 16×2 LCD
- 4 Channel Relay modules

- ESP8266 wifi module
- Arduino uno
- Resistors
- LED’s

OUTCOMES OF THE PROJECT:

The next phase for the Home automation market will occur based on a few key improvements in the technology available in Automation, such as improvement in Wireless Automation solutions as well as lowering of price points as the market begins to accept Home automation usage in larger volumes. Some trends that we foresee for this phase of the industry are

• Big companies like Philips, Siemens & Schneider will eventually bring out fairly mass market automation products with appealing user interface but at a lower price point than today, and more people will be able to afford the products
• Solution offerings will slowly move to a more user friendly design, where aside from a few key components, users will be able to buy and use the Automation products themselves without the aid of any technical expert

Signature of the Project Co-ordinator