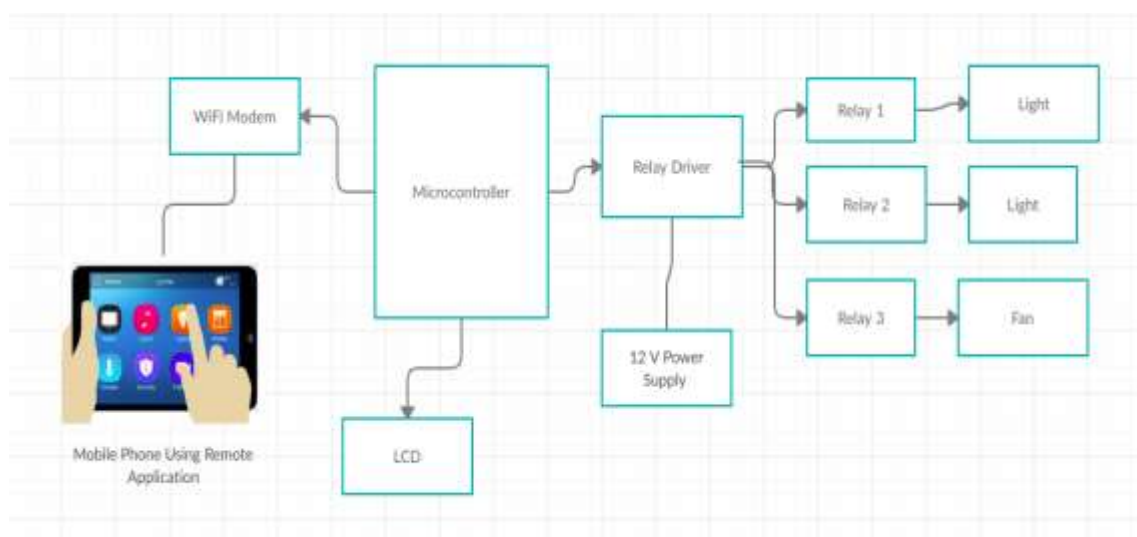# IOT Home Automation

IOT is used in order to control home appliances, thus automating modern homes through the internet. Home Automation system (HAS) using IoT is a system that uses computers or mobile devices to control basic home functions and features automatically through internet from anywhere around the world. It is meant to save the electric power and human energy.

Objective / Features: -

1. Build a system that uses three loads to demonstrate house lighting and a fan.
2. IR sensors is used so that the lights will automatically turn on and off according to the intensity of light. Temperature sensors will detect the room temperature and turn on and off fans.
3. To build a mobile app to control the devices. E.g. On/off, increase or decrease speed.
4. For this system we use an AVR family microcontroller.
5. LCD is used to display system status.
6. Microcontroller is interfaced with a WIFI modem to get user commands over the internet.
7. Relays are used to switch loads.
8. The entire system is powered by a 12 V transformer.

Hardware Specifications

1. 8051 series Microcontroller.
2. WIFI Modem.
3. Diodes
4. Transformer
5. Relays
6. Voltage Regulator
7. Crystal
8. Lamps
9. LED
10. Relay Driver IC