

# HOME AUTOMATION WITH LOADS STATUS DETECTION USING GSM

## **AIM:**

Design and development of Home Automation with Loads status detection using GSM.

## **PURPOSE:**

In homes, there will be various loads to be operated and these loads are to be operated at some specific intervals according to our requirements and also based on the device constraints. For these purposes, a person should be employed to monitor the status of the loads. But there may be chances that the person may forget to operate these loads. And also it is not an easy task for a person to operate these loads manually as these loads run with high currents and high power consumption. This project gives the best solution for electrical power wastage. Also the manual operation is completely eliminated. This project is implemented on wireless technology. One of wireless communication system is GSM as it is very cheap and very easy to implement. Here we have implemented home automation with loads status detection using GSM.

## **DESCRIPTION:**

This project includes GSM (Sim800c) module, which is connected to Arduino through UART interface. Three loads connected to Arduino digital pins which are light, fan and motor respectively through relays.

## **WORKING:**

User can control loads through SMS. Arduino reads SMS commands and based on command Arduino controls loads accordingly. User can know loads status by sending request SMS to Arduino. Loads status displaying on LCD.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
Light	:	AC 230V
Fan	:	DC 12V
Motor	:	DC 5V/12V
Relay	:	12v DC Coil type
Power Source	:	12v 2 amp Adaptor

### SOFTWARE:

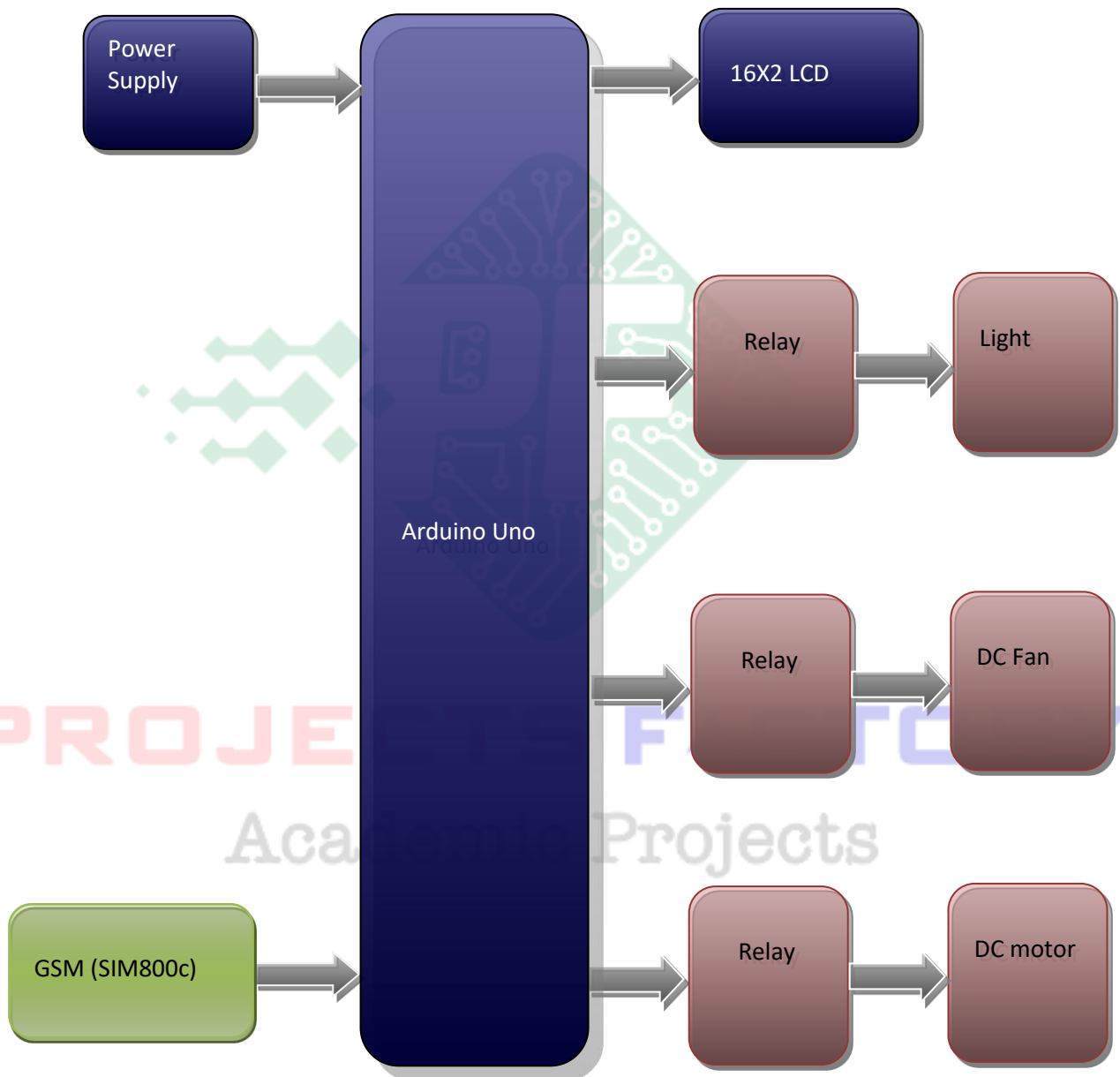
Arduino IDE

Proteus based circuit diagram

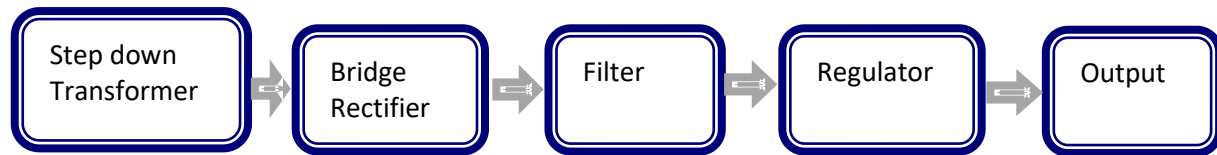
### APPLICATIONS:

- Home Appliances
- Industrial Applications

**BLOCK DIAGRAM:**

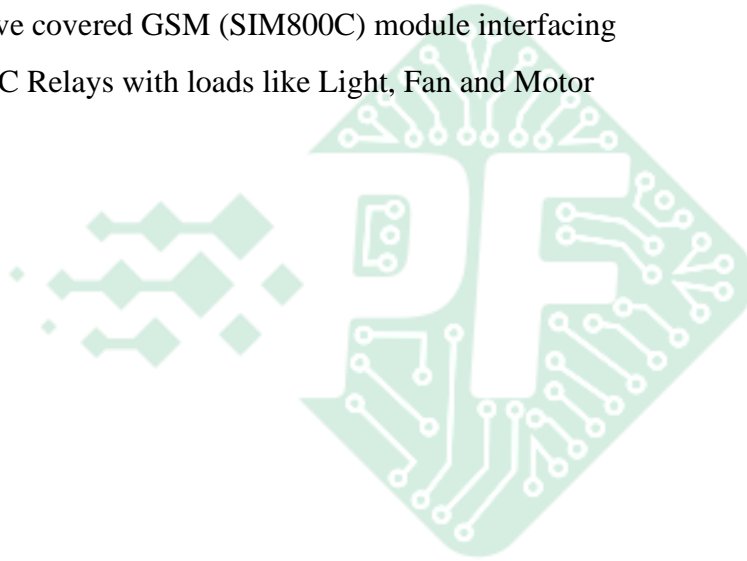


## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- 12V DC Relays with loads like Light, Fan and Motor



**PROJECTS FACTORY**  
Academic Projects