HOME APPLIANCES CONTROL USING MOBILEPHONE AND REMOTE

AIM:

Design and development of Home appliances control using mobile phone and remote.

PURPOSE:

Every house has manual control of all loads. Some remotes available like RF or IR. Using these we can control loads from very short distance. It would be help full when it has more distance coverage. Here we propose solution like home appliances control using mobile phone and remote. Using this we can control loads from remote location using GSM and short distance with RF remote.

DESCRIPTION:

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

WORKING:

User can control loads through SMS and RF remote. Arduino reads SMS commands and based on command Arduino controls loads accordingly. User can know loads status by sending request SMS to Arduino. By pressing keys in RF transmitter loads will ON and OFF accordingly. Here we have two way load control facility with both GSM and RF. Loads status displayed on LCD.

TECHNICAL SPECIFICATIONS:

HARDWARE:

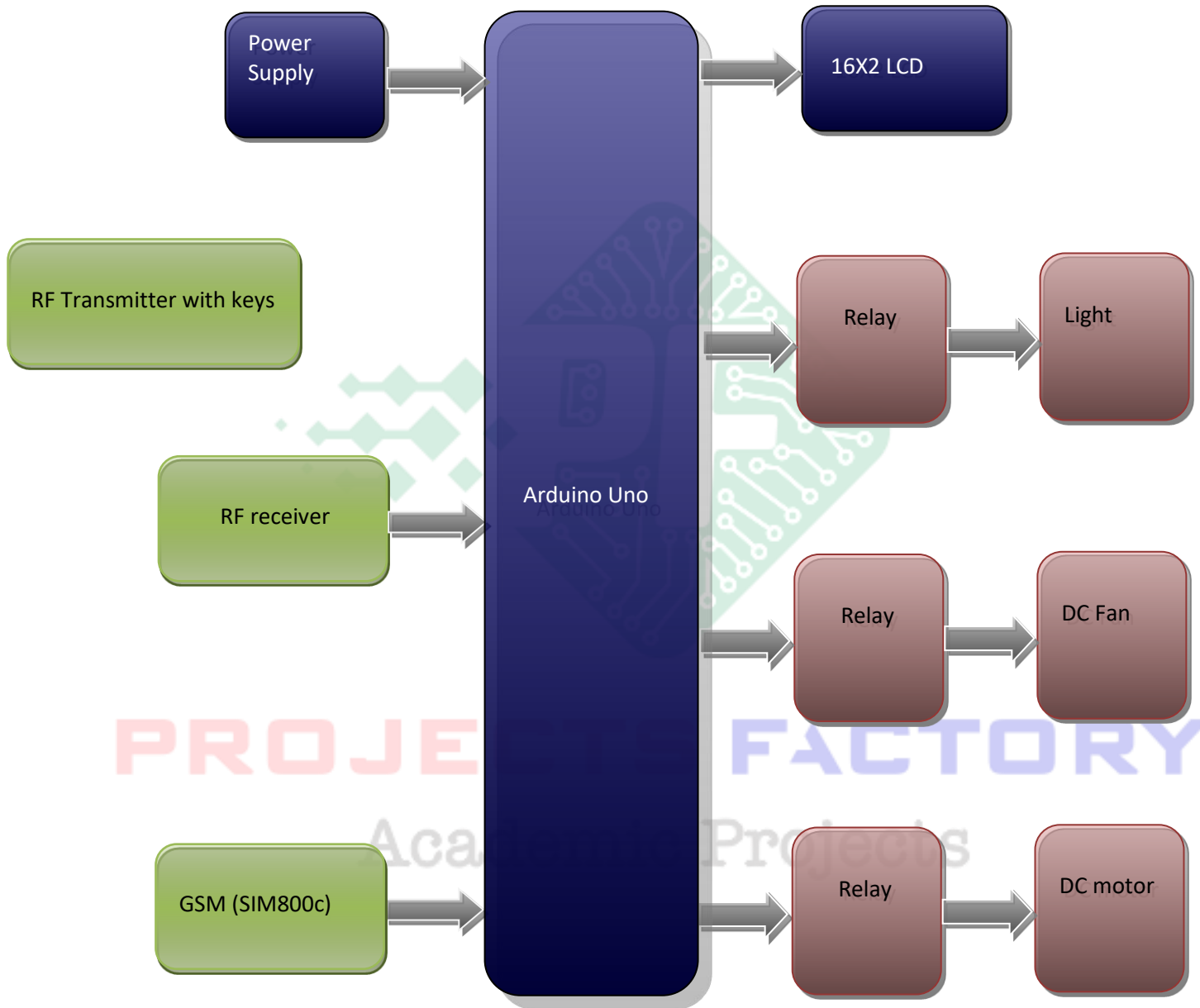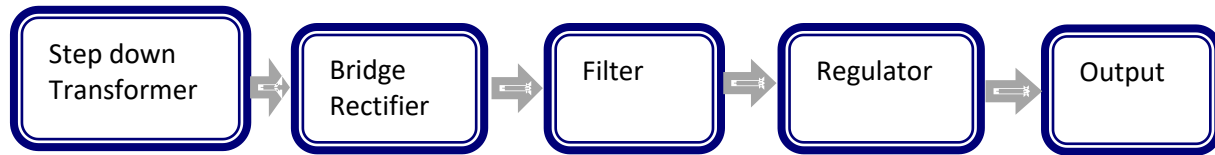|		
Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
RF module	:	433Mhz
Light	:	AC 230V
Fan	:	DC 12V
Motor	:	DC 5V/12V
Relay	:	12v DC Coil type
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

Arduino IDE

Proteus based circuit diagram

APPLICATIONS:

➢ Home Appliances
➢ Industrial Applications

BLOCK DIAGRAM:


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Power Supply ──→ Arduino Uno ──→ 16X2 LCD

RF Transmitter with keys

RF receiver ──→ Arduino Uno ──→ Relay ──→ Light

                                Relay ──→ DC Fan

GSM (SIM800c) ──→ Arduino Uno ──→ Relay ──→ DC motor
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POWER SUPPLY BLOCKDIAGRAM:

Step down Transformer → Bridge Rectifier → Filter → Regulator → Output

INTERFACES COVERD:

- We have covered GSM (SIM800C) module interfacing

- RF module interface

- 12V DC Relays with loads like Light, Fan and Motor