

GSM BASED FLAMMABLE GAS AND FIRE ACCIDENT PREVENTION SYSTEM

AIM:

Design and development of GSM based Flammable Gas and fire Accident prevention System using Arduino.

PURPOSE:

Now a day's so many industries used gases to run machines. But there is chance to get fire in any situation. Continuous manual monitoring is very difficult to do. Detecting fire and gas before spreading can avoid big loses. Also adding GSM modem is added advantage of remote monitoring. Here we proposed GSM based flammable gas and fire accident prevention system using Arduino.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART interface. Gas (MQ135) Sensor and Fire (IR) Sensors are connected to Arduino Analog and Digital pins. Siren connected to Arduino through relay.

WORKING:

Arduino continuously read Gas (MQ135) and Fire (IR) sensors. Sensors status will be update to LCD. If any abnormal conditions occur then siren sound will come. SMS will be send if any sensor gets activated. We can get sensors data at any time based to request SMS to Arduino.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
Siren	:	12/5 V DC
Fire Sensor	:	IR sensor
Gas Sensor	:	Mq135
Power Source	:	12v 2 amp Adaptor

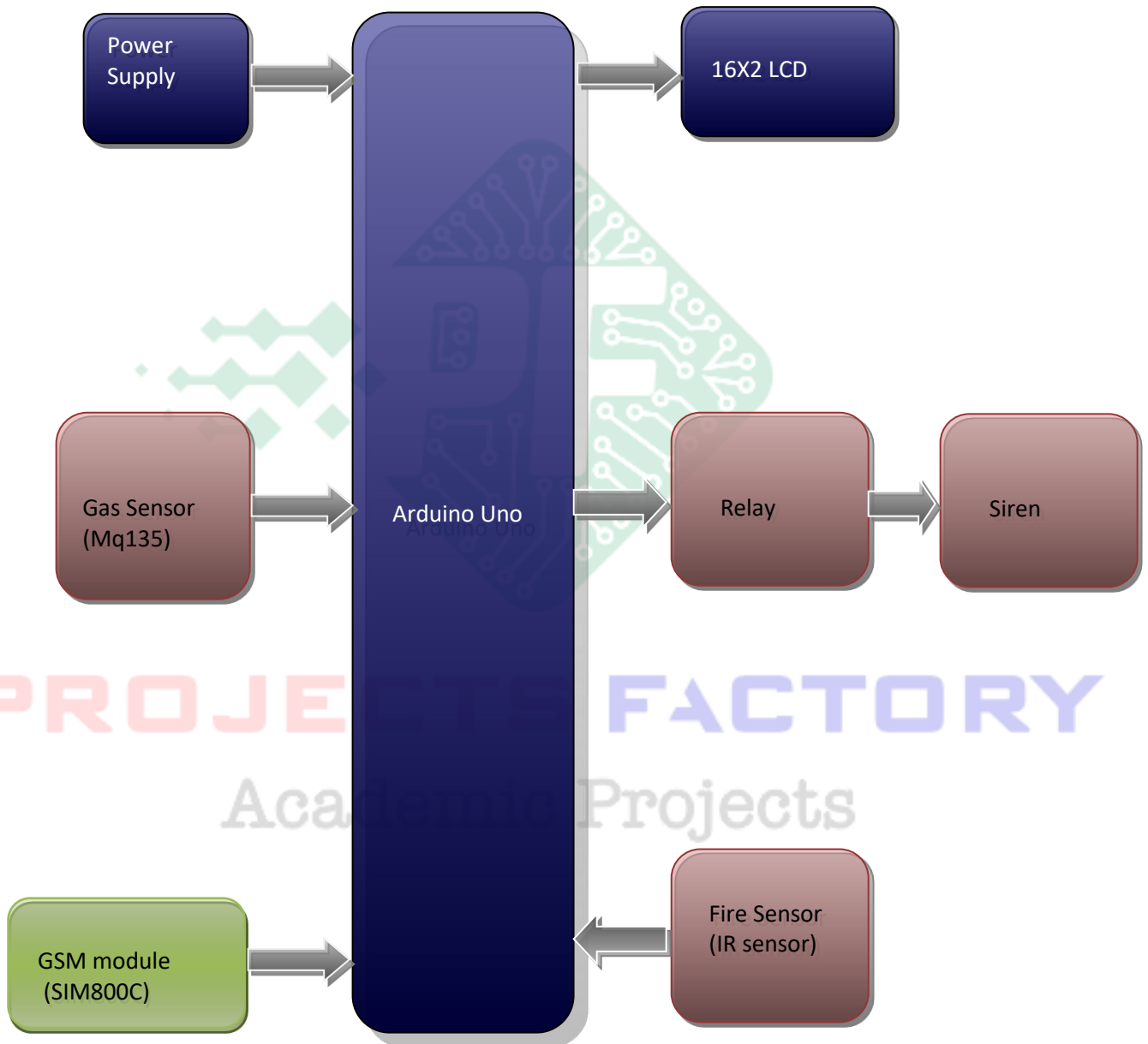
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

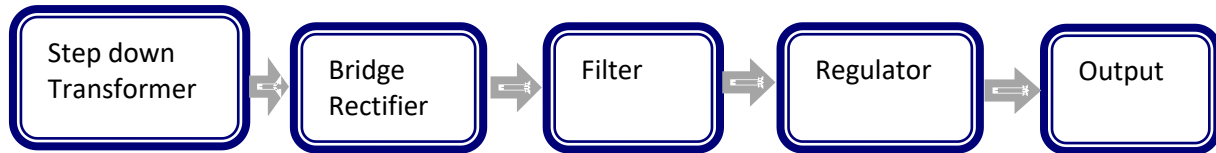
APPLICATIONS:

- Industrial Applications
- Home Applications
- Gas pipe maintenance systems

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- MQ135 and Fire Sensors interface

PROJECTS FACTORY
Academic Projects