

IOT BASED FIRE ALERTING SYSTEM

AIM:

Design and development of iot based fire alerting system using Arduino.

PURPOSE:

Fire(IR) sensors designed to detect fire alert people. These sensors are very sensitive and respond immediately before spreading heavily. Also alerting with siren to immediate evacuation. IOT alerts to take action like fire engine service. These IOT links are public and can be monitor by public section like police, government officials and fire engine services.

DESCRIPTION:

This projects consists multiple fire (IR) sensors along with WIFI (Esp8266/IOT module). Fire sensor and gas sensors connected to Arduino through digital IO pins. WIFI (Esp8266/IOT module) connected to Arduino through UART pins. Siren connected to Arduino through relay.

WORKING:

Whenever gas or fire occurred then these fire sensors sense and immediately gives signal to Arduino. These sensors status displayed on 16X2 LCD continuously. Arduino detects sensor signal and sends data to IOT server through WIFI (ESP8266/IOT module). At the same time relay will be ON to make siren ON. User can see data through server from anywhere without any wired connection. This can alert before getting worse.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
Fire Sensor	:	Infrared Sensor
Relay	:	12v Coil type
Siren	:	12v
Power Source	:	12v 1 amp DC battery

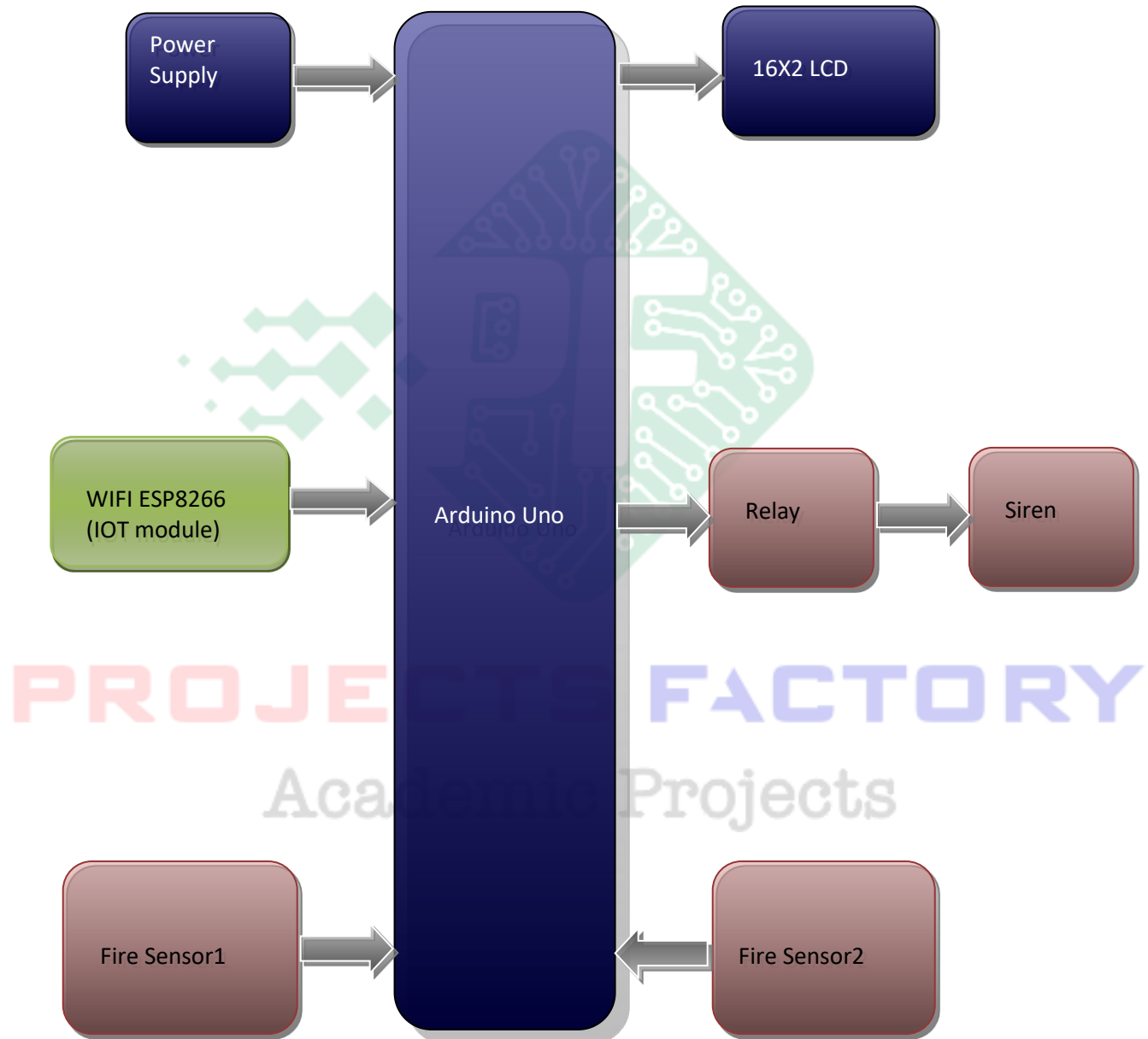
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

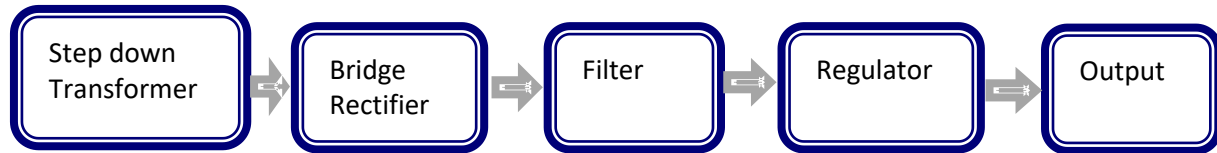
APPLICATIONS:

- Industries
- Building Management System (BMS)

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered WIFI (ESP8266/IOT) module interfacing
- Multiple fire sensor interfaces



PROJECTS FACTORY
Academic Projects