OVER LOAD PROTECTION FOR POWER GRIDS

AIM:

Design and Development of over Load protection for power grids.

PURPOSE:

Over load causes so many problems and some time it becomes very expensive. To Avoid this kind of over load problem need to read current of load. Because over load of grid cause series of losses. Here we have solution like over load protection for power grids using Arduino.

DESCRIPTION:

This project includes current sensor which is connected to Arduino analog pin. Load controlled by Relay which is connected to Arduino digital pin.

WORKING:

Using this project we can protect power grid by reading current consumption of load. Here current sensor interface to Arduino analog pin. While load current passes from wire then it can generate minute magnetic field and that will capture by current sensor. Current sensor output will be analog output. Based on analog output Arduino converts into current value. If current value is more than desired value then Arduino off the relay which controls load. All this information displaying on 16X2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
LCD	:	16X2 LCD Display
Crystal	:	16 MHz
Current Sensor	:	Coil Type Electromagnetic type
Relay	:	12V DC Electromagnetic
Buzzer	:	DC 5V
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

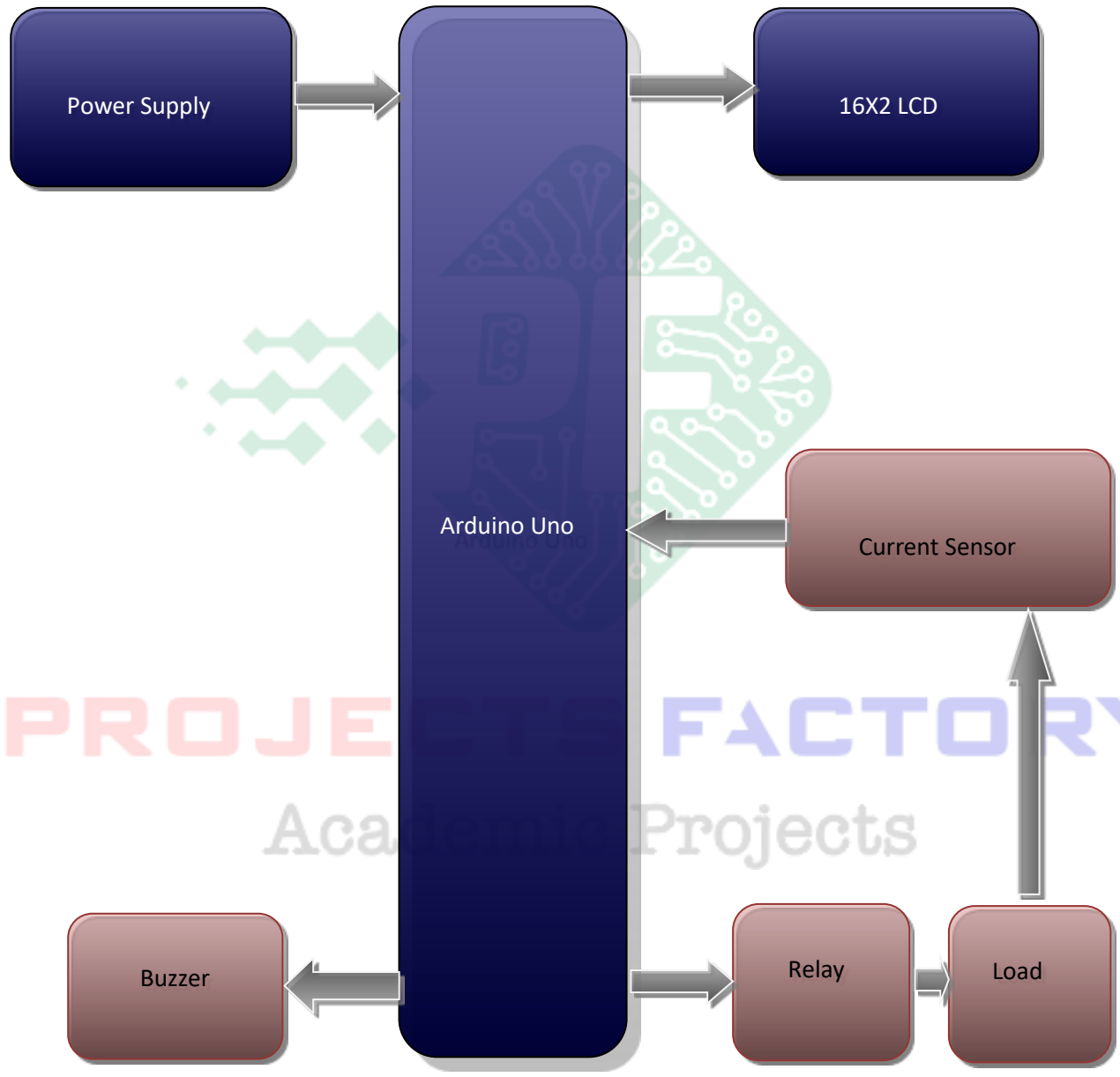
Arduino IDE

Proteus based circuit diagram

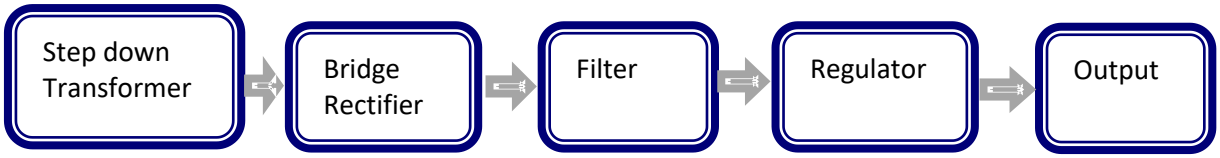
APPLICATIONS:

- Current monitoring Applications
- Power monitoring Applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- Coil type current sensor interface