IOT STREETLIGHT CONTROL SYSTEM

AIM:

Design and development of IOT based streetlight control system using Arduino.

PURPOSE:

Now a days Street lights are manual and switching them ON and OFF is very difficult. Electricity department lineman has to put lot of efforts to operate them. To solve this issue here we proposed IOT streetlight control system.

DESCRIPTION:

This project includes WIFI (Esp8266/IOT module) which is connected to Arduino through UART interface. DC Light connected to Arduino through Relay. LDR sensor connected to Arduino digital IO pin. Current sensor connected to Arduino analog pin to read current consumption of light.

WORKING:

Arduino reads LDR status and sends to IOT server through WIFI (Esp8266/IOT module). Based LDR status (LIGHT/DARK) user can control light according to his wish.

Additionally user gets current consumption of light in IOT server. All this information displayed on LCD. Monitoring can be done from anywhere using IOT server.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
Relay	:	12V Coil type
Current Sensor	:	ACS712
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

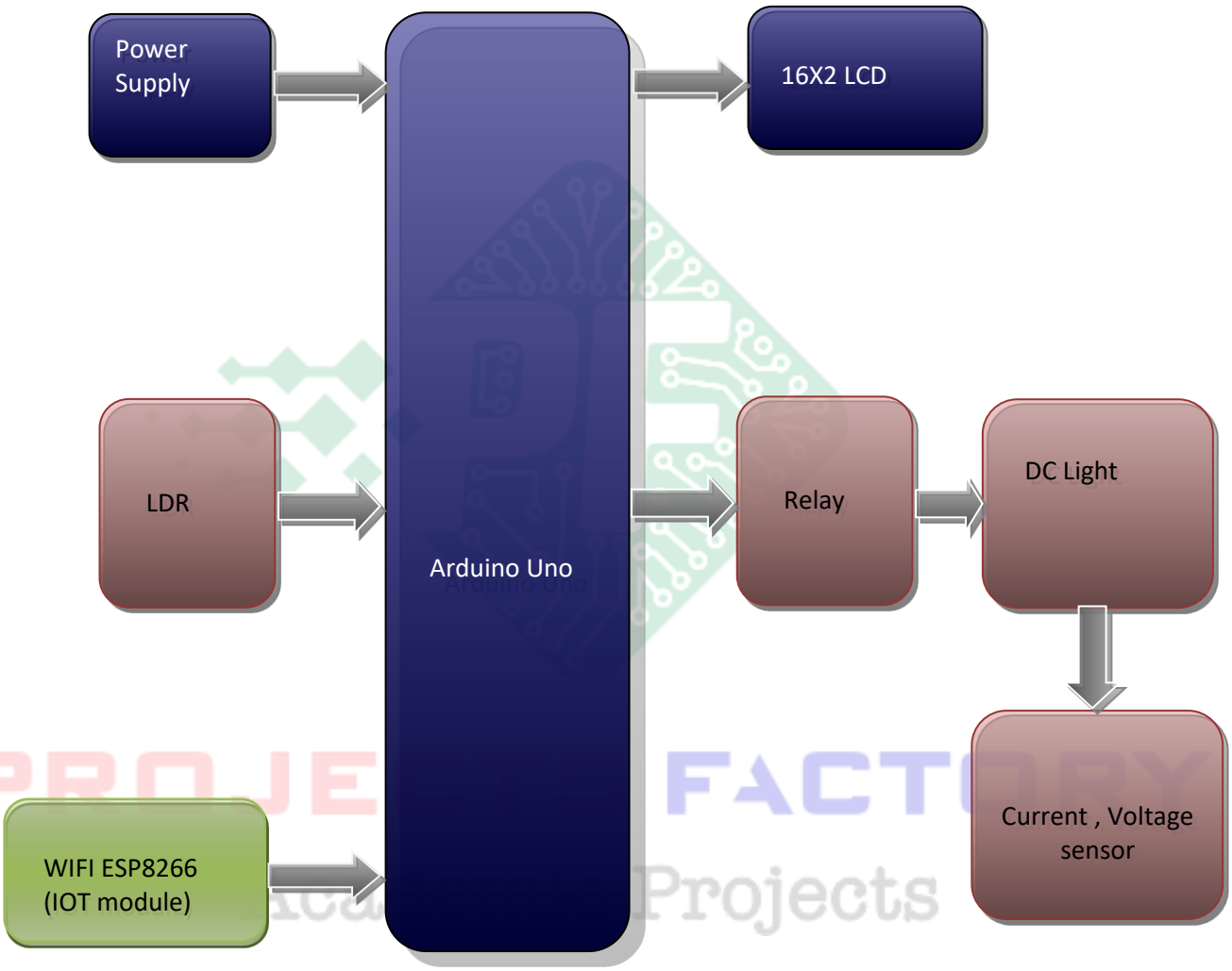
Arduino IDE

Proteus based circuit diagram

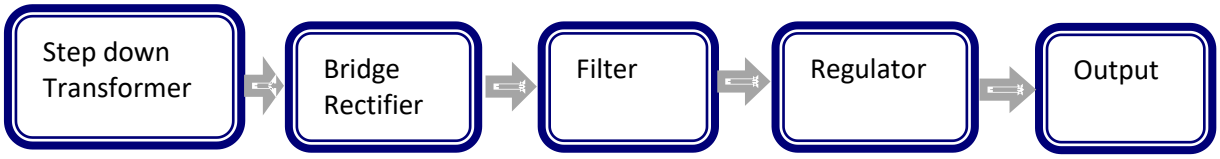
APPLICATIONS:

- Street Light
- Electricity Maintenance

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered WIFI (ESP8266/IOT) module interfacing
- Relay interface for Light control
- Current sensor interface