

LDR BASED STREET LIGHT

AIM:

Design and Development of LDR based Street light control.

PURPOSE:

Nowadays, human has become too busy and is unable to find time even to switch off the lights wherever not necessary. This can be seen more often in the case of street lights. The present system is like, the street lights will be switched on in the evening before the sun sets and they are switched off the next day morning after there is sufficient light on the roads. But the actual timings for these street lights to be switched ON are when there is absolute darkness. With this, the power will be wasted up to some extent. This project gives the best solution for electrical power wastage. Also the manual operation of the lighting system is completely eliminated. Here based on light intensity Street light (LED) brightness will vary. Here project title is LDR based street light control.

DESCRIPTION:

This project includes LDR which is connected to Arduino digital analog pin. LED light controlled by BC547 connected to Arduino PWM pin.

WORKING:

In this project LDR can sense luminous of environmental light. LDR resistance will vary based of luminous. Based on resistance voltage will vary and that voltage read by Arduino analog pin. Based on analog value, Arduino controls LED brightness by PWM pulses. If Darkness is high then LED will glow in bright. LDR analog value will display on 16X2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
LCD	:	16X2 LCD Display
Crystal	:	16 MHz
LED Light Control	:	BC547
LED Light	:	5V DC
Light Sensor	:	LDR DC 5V
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

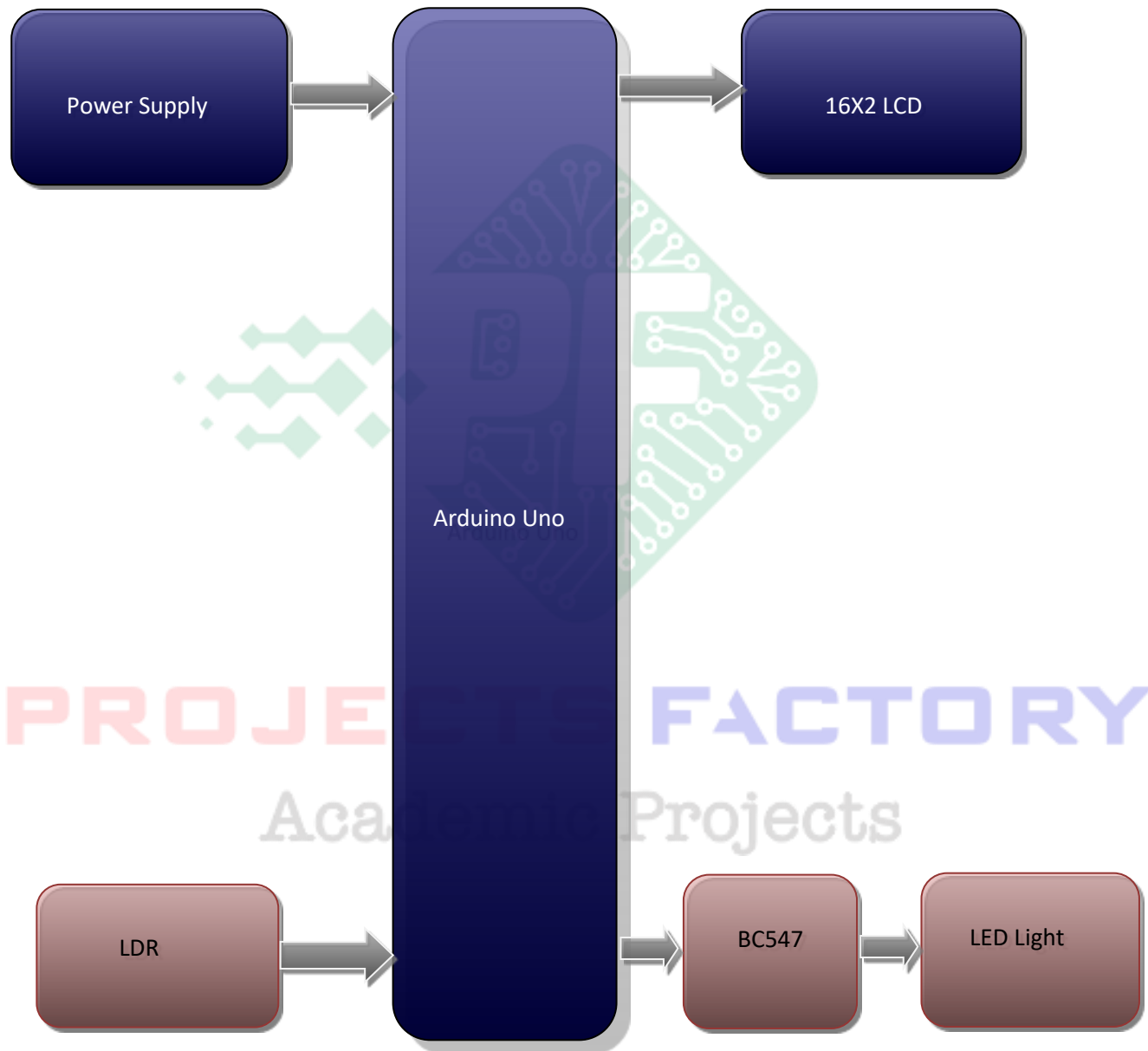
Arduino IDE
Proteus based circuit diagram

APPLICATIONS:

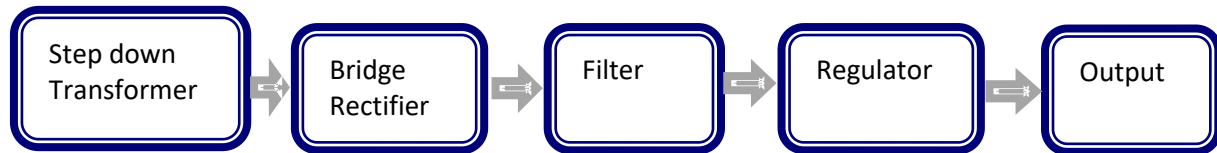
- Smart Street Light Applications

PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- LDR and Light Control circuit interface

PROJECTS FACTORY
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