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"Street Light Monitoring System"

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ABSTRACT
The aim of automated streetlight management system using **IOT** is the conservation of energy by reducing electricity wastage as well as to reduce the manpower. Streetlights are the elemental part of any city since it facilitates better night visions, secure roads, and exposure to public areas but it consumes a quite large proportion of electricity. In the manual streetlight system lights its powered from sunset to sunrise with maximum intensity even when there is sufficient light available. This energy wastage can be avoided by switching off lights automatically. The saved energy can be efficiently utilized for other purposes like residential, commercial, transportation etc. This can be achieved using an IOT enabled streetlight management system. The project uses Light Emitting Diodes (LED) that do not consume an enormous amount of electricity to replace the power consuming traditional HID lamps. LED lights along with LDR enables the intensity variation which is infeasible with the HID lamps. As LEDs are directional light sources it can emit light in specific direction thereby optimizing the efficiency of the streetlights.

I. INTODUCTION

The street lighting is one of the largest energy expenses for a city. An intelligent street lighting system can cut municipal street lighting costs as much as 50% - 70%. An intelligent street lighting system is a system that adjusts light output based on usage and occupancy. The street light controller should be installed on pole lights which consist of microcontroller along with various sensor and wireless module .. The data from the street light controller can be transferred to base station using wireless technology to monitor the system . The mode of operation of the system can be conducted using auto mode and manual mode.

II. LITERATURE REVIEW

A gathering of researcher from establishment Sir Visvesvarayahad created keen road light GPS beacon
utilizing **Zigbee remote module**. They will likely screen thewellbeing of Street lights and ahead checked outcome to the overseen station. Inside the light module, itincorporates light depending resistors (LDR) module, microcontroller module and Transmission module. The light module will speak with the overseen Center through wi-fi the utilization of Zigbee module Various methods have been proposed by various scholars one such technique that came recently is the use of the DHT11 sensor . As the name recommends the DHT 11 is a temperature and humidness sensor with an extraordinary exact stickiness and temperature alignment.The single-wired sequential interface framework has been incorporated to turn out to be speedy and very simple.

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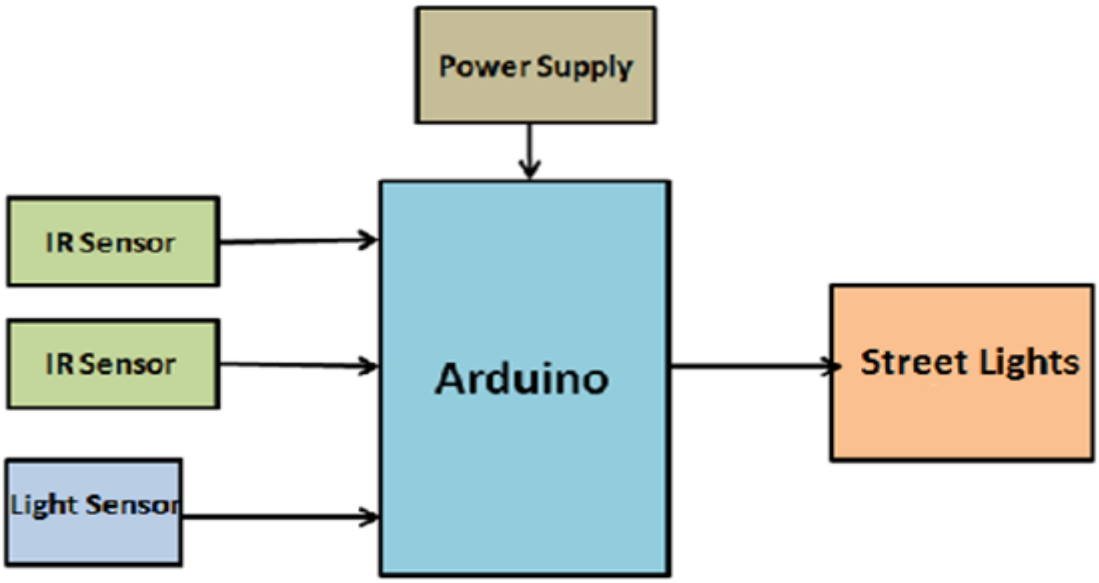
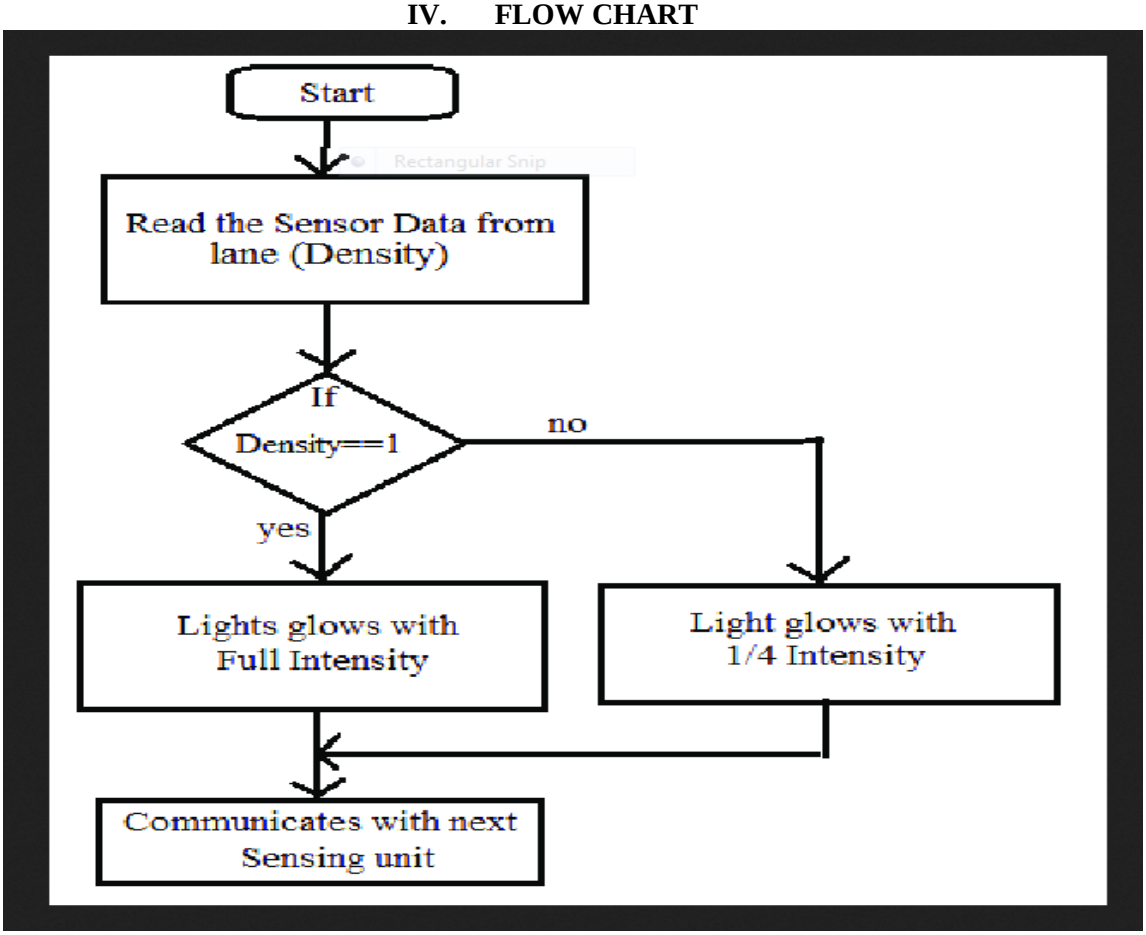
III. BLOCK DIAGRAM



IV. FLOW CHART



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V. METHODOLOGY

- HARDWERE REQURIMENTS
- ARDUINO UNO
- BREADBOARD
- IR SENSOR
- LDR SENSOR
- LED'S
- WIRES
- SOFTWERE REQUIRIMENTS
- C PROGRAMMING LANGUAGE
- ARDUINO IDE

Output

VI. CONCLUSION

We have developed this street light monitoring system project,which is very best idea for nowdays. By using this projectwe save the man power as possible. As well as save the energy (light) consumption with respect to the municipal street lights.An intelligent street lighting system can cut municipal street lighting costs as much as 50% - 70%.

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Arduino Code

```
int ir1=2;
int ldr1=A0;

int led1=6;
int led2=7;
int led3=8;
int led4=9;
int led5=10;

void setup()
{

pinMode(ir1,INPUT);
pinMode(ldr1,INPUT);

pinMode(led1,OUTPUT);
pinMode(led2,OUTPUT);
```

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```
pinMode(led3,OUTPUT);
pinMode(led4,OUTPUT);
pinMode(led5,OUTPUT);

}

void loop(){
  int ldr1Status = digitalRead(ldr1);
  int ledStatus = digitalRead(ir1);


  if (ldr1Status ==1)
  {
if(ledStatus == HIGH)

{
digitalWrite(led1,LOW);
digitalWrite(led2,LOW);
digitalWrite(led3,LOW);
digitalWrite(led4,LOW);
digitalWrite(led5,LOW);

}
else
{
digitalWrite(led1,HIGH);
digitalWrite(led2,HIGH);
digitalWrite(led3,HIGH);
digitalWrite(led4,HIGH);
digitalWrite(led5,HIGH);
    }
}
   }
```