Page 6 – Hardware and Software Requirements

Hardware Required :

* Arduino Uno - Microcontroller Board
* Electromechanical Relay
* Light Dependent Resistor (or Photoresistor)
* 1K ohm resistor
* Solderless Breadboard
* Dupont Jumper Wires
* Light Bulb (Street Light)
* Bulb Holder - Lamp Holder (or Bulb Socket)

Software Required:

Arduino Code -

int sensorPin = A0;

int relayPin = 8;

void setup()

{

Serial.begin(9600);

pinMode(sensorPin, INPUT);

pinMode(relayPin, OUTPUT);

}

void loop()

{

int sensorValue = analogRead(sensorPin);

if( sensorValue <= 25 ) // Change the value as per your requirement

{

digitalWrite(relayPin, LOW);

Serial.println(sensorValue);

delay(100);

}

else

{

digitalWrite(relayPin, HIGH);

Serial.println(sensorValue);

}

}

Page 8 – References

Some Educational Resources used as Reference :

<https://www.twi-global.com/technical-knowledge/faqs/what-is-a-smart-city>

<https://en.wikipedia.org/wiki/Smart_city>

<https://www.instructables.com/Smart-Street-Light-Energy-Conservation-CPE-133-Fin/>

<https://docs.arduino.cc/>

<https://www.circuitbasics.com/>