float x,y ;

const int pingPin = 7;

int red=11;

int blue=10;

int green=9;

void setup ()

{

pinMode( 8, INPUT);

pinMode( 5, OUTPUT);

pinMode( A5, INPUT);

pinMode(red,OUTPUT);

pinMode(blue,OUTPUT);

pinMode(green,OUTPUT);

Serial.begin(9600);

}

void loop ()

{

x= digitalRead(8);

y= analogRead(A5);

//Serial.println(x);

//Serial.println(y);

if ( (x>0) && (y<550))

{

digitalWrite(5, HIGH);

Serial.println("Bulb ON");

delay (5000);

}

else

digitalWrite(5, 0);

Serial.println("Bulb OFF :)");

long duration, inches, cm;

pinMode(pingPin, OUTPUT);

digitalWrite(pingPin, LOW);

delayMicroseconds(2);

digitalWrite(pingPin, HIGH);

delayMicroseconds(5);

digitalWrite(pingPin, LOW);

pinMode(pingPin, INPUT);

duration = pulseIn(pingPin, HIGH);

inches = microsecondsToInches(duration);

cm = microsecondsToCentimeters(duration);

if(inches<20)

{

digitalWrite(red,HIGH);

digitalWrite(green,LOW);

digitalWrite(blue,LOW);

//Serial.println (" DOOR OPEN ");

//Serial.println(inches);

}

if(inches>70)

{

digitalWrite(red,LOW);

digitalWrite(green,HIGH);

digitalWrite(blue,LOW);

}

if(inches>20 && inches<70)

{

digitalWrite(red,LOW);

digitalWrite(green,LOW);

digitalWrite(blue,HIGH);

}

Serial.print("Distance- ");

Serial.print(inches);

Serial.print("in, ");

Serial.print(cm);

Serial.print("cm");

Serial.println();

delay(100);

}

long microsecondsToInches(long microseconds) {

return microseconds / 74 / 2;

}

long microsecondsToCentimeters(long microseconds) {

return microseconds / 29 / 2;

}

