**Home Automation Using Arduino**

float x,y;

#define trigPin 12

#define echoPin 10

int ledPin= 13;

int duration, distance;

#include<Servo.h>

Servo my;

char val;

void setup() {

Serial.begin(9600);

pinMode(2,INPUT);

pinMode(3,INPUT);

my.attach(11);

pinMode(4, OUTPUT);

pinMode(7,OUTPUT);

pinMode(8,INPUT);

pinMode(9,OUTPUT);

// pinMode(10,INPUT);

//pinMode(11,OUTPUT);

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(ledPin, OUTPUT);

pinMode(3,OUTPUT);

}

void loop()

{

x=analogRead(0);

y=((x/1024)\*5)\*100;

Serial.println(y);

delay(500);

if(y>44)

{

digitalWrite(7,1);

}

else

{

digitalWrite(7,0);

delay(500);

}

if(digitalRead(8)==HIGH)

{

digitalWrite(9,HIGH);

}

else

{

digitalWrite(9,LOW);}

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

distance = (duration/2) / 29.1;

if (distance >= 10 || distance <= 0)

{

// Serial.println("no object detected");

digitalWrite(ledPin,LOW);

}

else

{

Serial.println("object detected \n");

Serial.print("distance= ");

Serial.print(distance);

digitalWrite(ledPin,HIGH);

}

if(digitalRead(2)==HIGH)

{

my.write(0);

}

else

{

my.write(90);

}

analogRead(5);

float a = analogRead(5);

Serial.println(a);

if (a <=200) {

digitalWrite(4,1);

Serial.println("LDR is DARK, LED is ON");

}

else {

digitalWrite(4,0);

Serial.println("-----");

}

if (Serial.available())

{

val = Serial.read();

Serial.println(val);

if(val == 'TV')

digitalWrite(3,HIGH);

else if(val == 'tv')

digitalWrite(3,LOW);

}

}