HOME AUTOMATION

```
#include<Servo.h>
Servo s;
int t=2;
int e=3;
int l=11;

void setup()
{
 pinMode(t,OUTPUT);
 pinMode(e,INPUT);
 pinMode(l,OUTPUT);
 pinMode(13,OUTPUT);
 pinMode(4,INPUT);
 s.attach(5);
 Serial.begin(9600);
}

void loop()
{
//ultrasonic sensor  used to indicatate BULB glowing and Door open(servo motor)
 digitalWrite(t,1);
 digitalWrite(t,0);
 delayMicroseconds(10);
 digitalWrite(t,0);
 float dur=pulseIn(e,1);
 float dis=(dur*0.0343)/2;
```

```
Serial.print("distance:");
Serial.println(dis);
if(dis>150){
  digitalWrite(l,0);
  s.write(180);
 }
   else{
   digitalWrite(l,1);
   s.write(0);
 }

//Temprature sensor
double a= analogRead(A0);
 double t= (((a/1024)*5)-0.5)*100;
 Serial.print("temprature value:");
 Serial.println(t);
 delay(1000);

 if(t>100)
   digitalWrite(13,1);
 else
   digitalWrite(13,0);
   delay(1000);

 //PIR sensor
 digitalWrite(13,0);
 int a1=digitalRead(4);
```

HOME AUTOMATION

```
 Serial.println(a);

 if(a1==1){

   Serial.println("motion detected:");

   digitalWrite(13,1);

 }

 delay(1000);

}
```