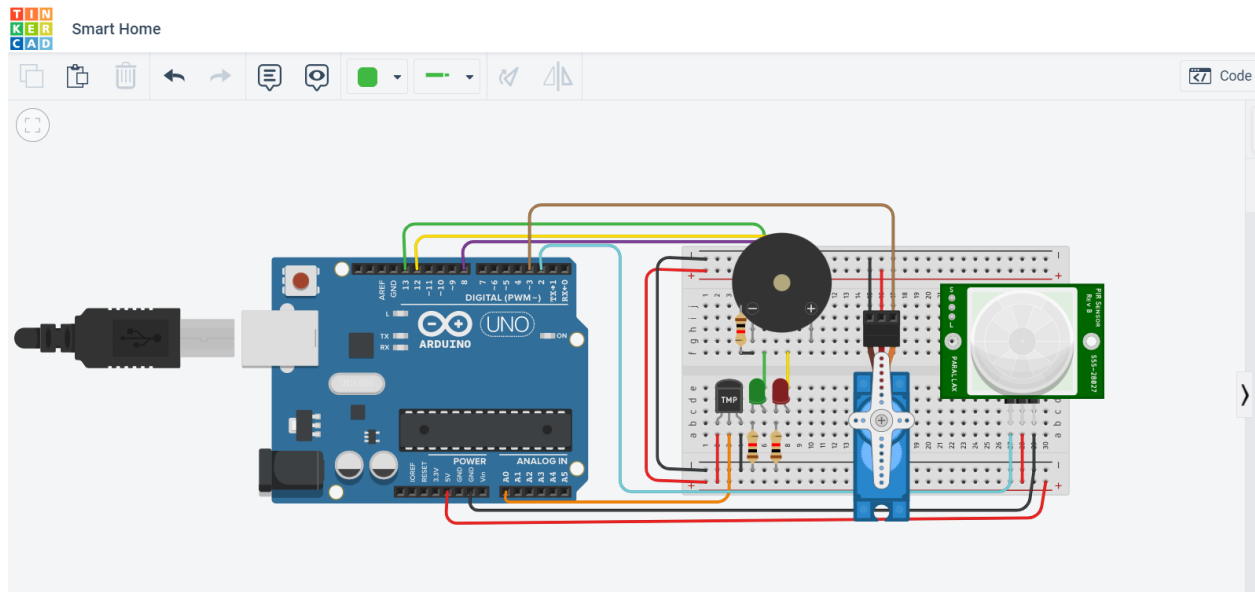


Circuit Diagram:



Code:

```
#include<Servo.h>

Servo s;

int modePin=A0;

int b=2;

int i;

void setup()
{
  Serial.begin(9600);
  pinMode(13,OUTPUT);
  pinMode(12,OUTPUT);
  pinMode(b,INPUT);
  pinMode(8,OUTPUT);
  s.attach(3);
}

void loop()
```

```
{
    double a=analogRead(A0);
    double t=((a/1024)*5)-0.5)*100;
    Serial.print("temperature value: ");
    Serial.println(t);
    delay(1000);
    if(t>=25)
    {
        digitalWrite(12,1);
        digitalWrite(13,0);
    }
    if(t<=22)
    {
        digitalWrite(13,1);
        digitalWrite(12,0);
    }
    digitalWrite(8,0);
    int b = digitalRead(2);
    if(b==1)
    {
        Serial.println("Motion Detected!");
        digitalWrite(8,1);
        delay(10);
        for(int i = 0; i <= 90; i++)
        {
            s.write(i);
            delay(20);
        }
    }
    delay(1000);
}
```

```
for(int i=90;i>=0;i--)  
{  
    s.write(i);  
    delay(20);  
}  
delay(1000);  
}  
delay(1000);  
}
```