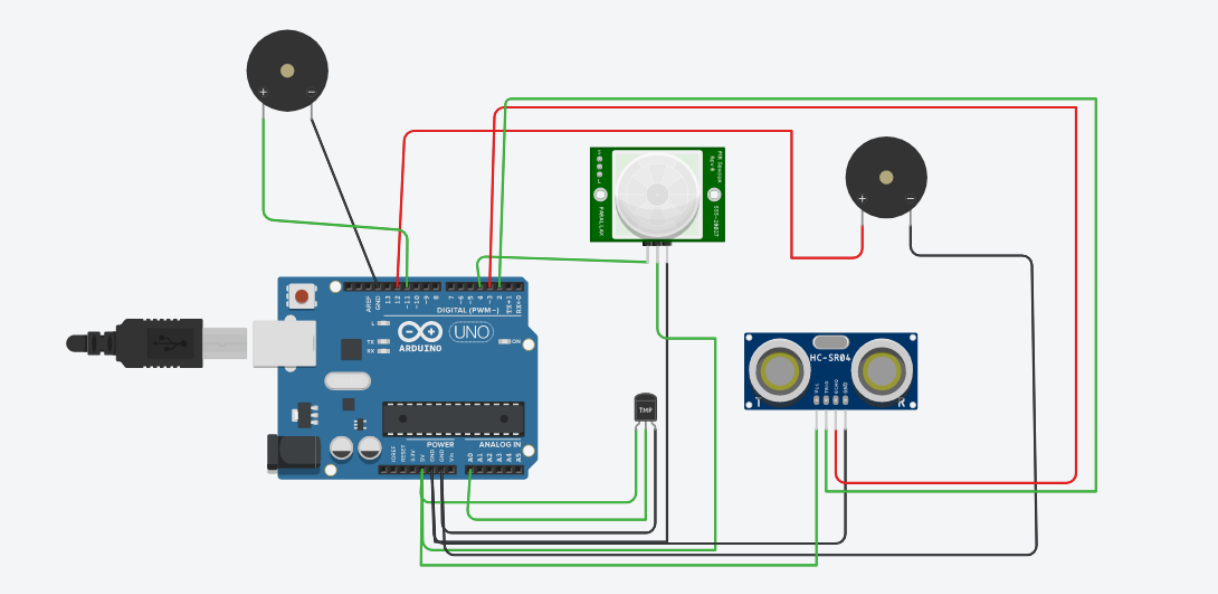
Circuit Design



Program

```
int t=2;
int e=3;
void setup()
{
  pinMode(4,INPUT);
  Serial.begin(9600);
  pinMode(t,OUTPUT);
  pinMode(e,INPUT);
  pinMode(13,OUTPUT);
  pinMode(11,OUTPUT);
  pinMode(12,OUTPUT);
  }
void loop()
{
 digitalWrite(t,LOW);
```

```
digitalWrite(t,HIGH);
delayMicroseconds(10);
digitalWrite(t,LOW);

float dur=pulseIn(e,HIGH);
float dis=(dur*0.343)/2;
Serial.println("the distance is:");
Serial.println(dis);
 if(dis<1000){
   tone(12,30);
   delay(1000);
 }
 else{
   noTone(12);
   delay(1000);
  }

double a = analogRead(A0);
 double c=(((a/1024)*5)-0.5)*100;
 Serial.print("Celcius value:");
 Serial.print(c);
 delay(1000);
 if(c>50)
   digitalWrite(13,HIGH);
 else
   digitalWrite(13,LOW);

 int p=digitalRead(4);
 Serial.println(p);
 if(p==1){
   digitalWrite(11,HIGH);
```

```
    Serial.println("Motion detected!!!");
    delay(1000);
  }
  else{
    digitalWrite(11,LOW);
    Serial.println("Motion not detected!!!");
  delay(1000);
  }
}
```

Output: