```
#define POTENTIOMETER_PIN A0
float temp;
int tempPin=0;
int led = 11;
int sensor = 2;
int state = LOW;
int val = 0;
void setup()
{
  Serial.begin(9600);
  pinMode(13,OUTPUT);
  pinMode(12,OUTPUT);
  pinMode(led, OUTPUT);
  pinMode(sensor, INPUT);
}
void loop()
{
  temp = analogRead(tempPin);
  temp = temp*0.488;
  Serial.print("Temperature = ");
  Serial.print(temp);
  Serial.print("*C");
  Serial.println();
  if(temp>100)
  {
    digitalWrite(12,HIGH);
  }
  else
          digitalWrite(12,LOW);
  int a = analogRead(POTENTIOMETER_PIN);
  if(a>500)
```

```
 {
   digitalWrite(13,HIGH);
 }
 else
   digitalWrite(13,LOW);

 Serial.print("Potentiometer = ");
 Serial.println(analogRead(POTENTIOMETER_PIN));

   val = digitalRead(sensor);
 if (val == HIGH) {
   digitalWrite(led, HIGH);
   delay(500);

   if (state == LOW) {
     Serial.println("Motion detected!");
     state = HIGH;
   }
 }
 else {
     digitalWrite(led, LOW);
     delay(500);

     if (state == HIGH){
       Serial.println("Motion stopped!");
       state = LOW;
   }
 }

 delay(100);
}
```