```
#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);
}
```