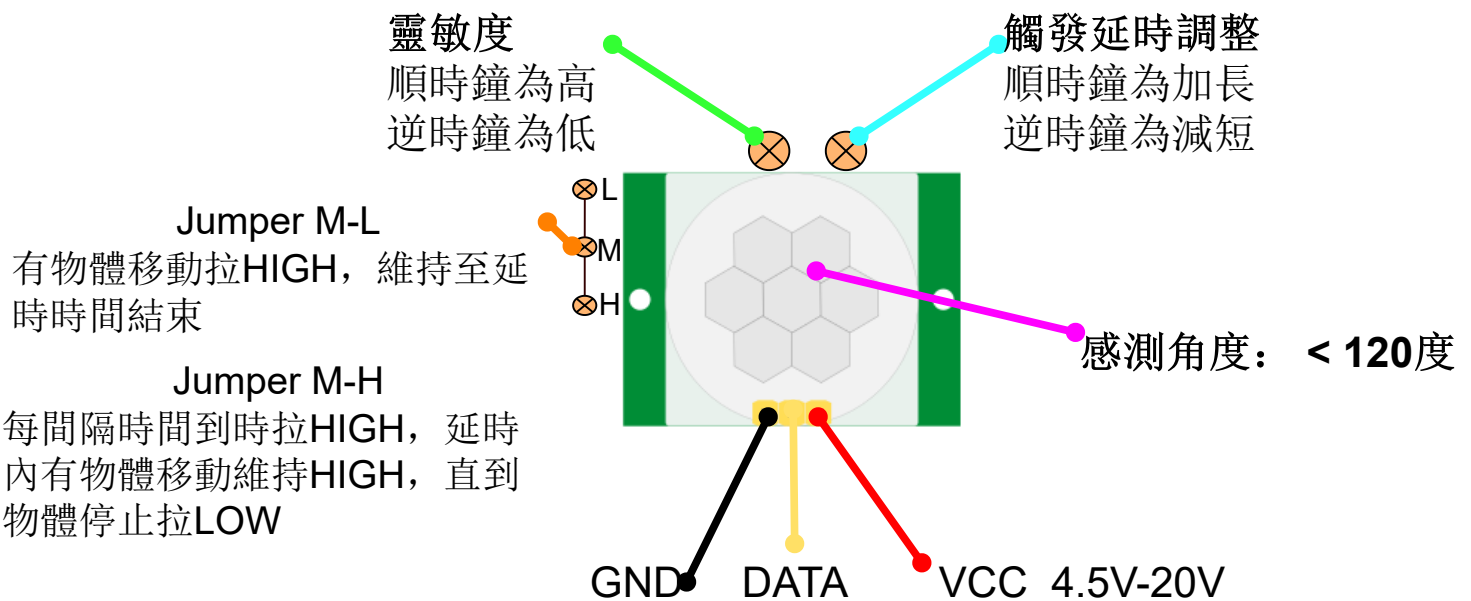


PIR人體紅外線感測器 HC-SR501

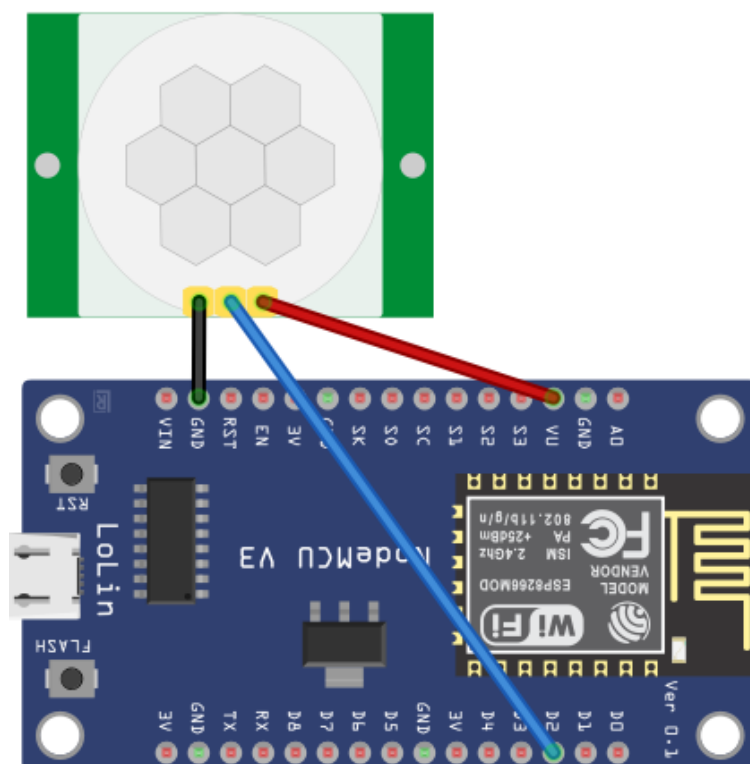
此章節解說如何透過 NodeMCU 擷取人體紅外線感測器 PIR(HC-SR501)的數值，及數值的意義。如果對於建置環境不了解，先參考「NodeMCU_HelloWorld」章節

硬體介紹：

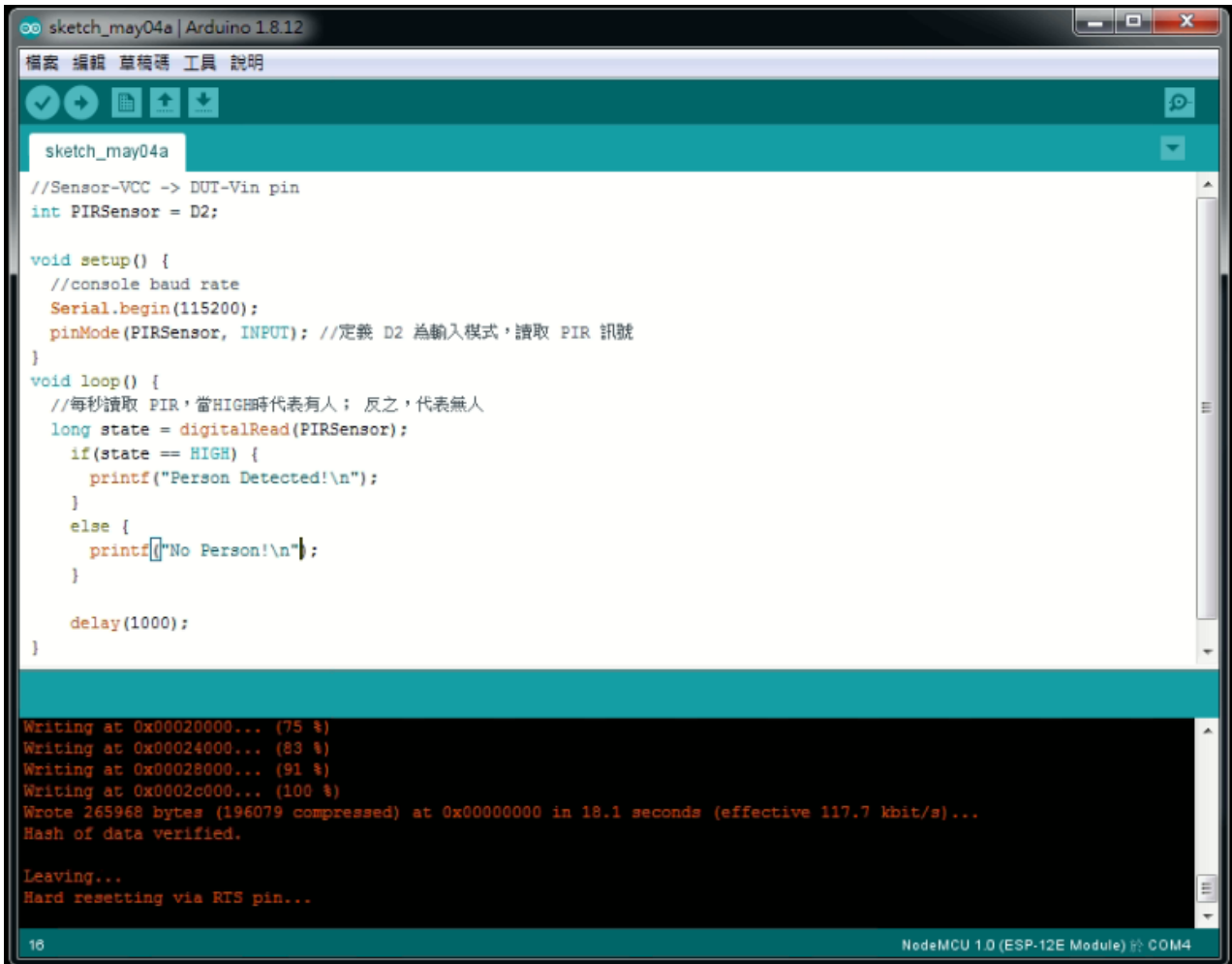


前置作業：

將 VCC 與 GND接上，DATA訊號接在 D2 Pin 腳



1. 編寫草稿碼 -> 上傳至 NodeMCU 開發板



The screenshot shows the Arduino IDE interface with a sketch named 'sketch_may04a'. The code defines a PIR sensor on pin D2 and prints 'Person Detected!' or 'No Person!' based on the sensor's state. The serial monitor shows the upload progress, indicating that the code was successfully written to the NodeMCU 1.0 (ESP-12E Module) at COM4.

```
sketch_may04a | Arduino 1.8.12
檔案 編輯 草稿碼 工具 說明

sketch_may04a

//Sensor-VCC -> DUT-Vin pin
int PIRSensor = D2;

void setup() {
  //console baud rate
  Serial.begin(115200);
  pinMode(PIRSensor, INPUT); //定義 D2 為輸入模式，讀取 PIR 訊號
}

void loop() {
  //每秒讀取 PIR，當HIGH時代表有人；反之，代表無人
  long state = digitalRead(PIRSensor);
  if(state == HIGH) {
    printf("Person Detected!\n");
  }
  else {
    printf("No Person!\n");
  }

  delay(1000);
}

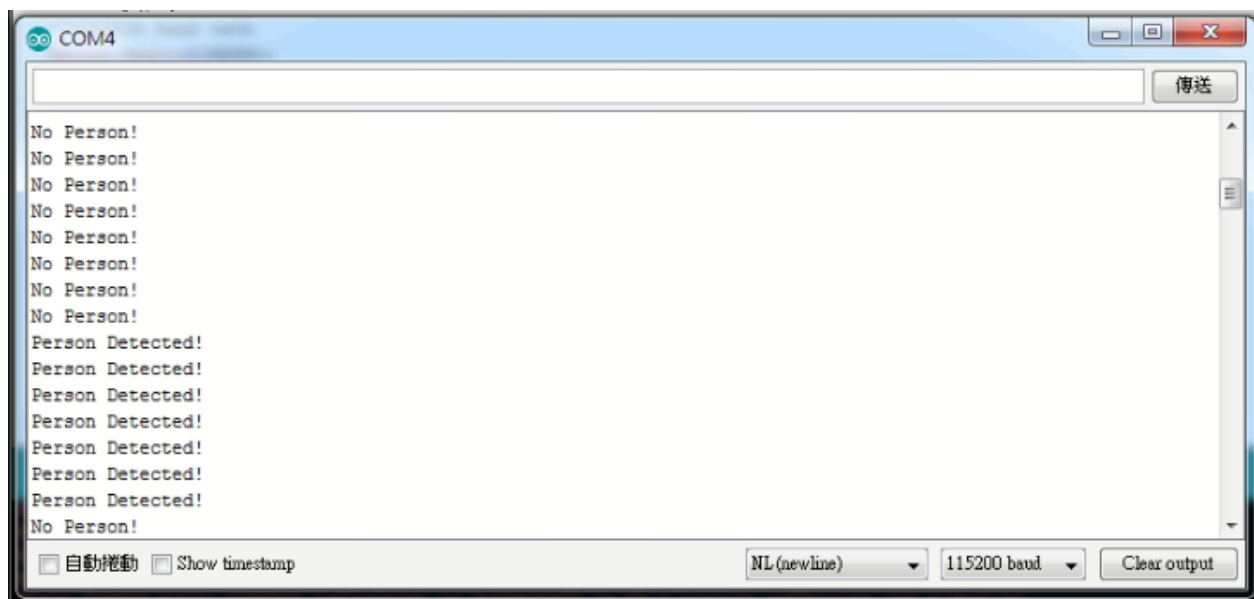
Writing at 0x00020000... (75 %)
Writing at 0x00024000... (83 %)
Writing at 0x00028000... (91 %)
Writing at 0x0002c000... (100 %)
Wrote 265968 bytes (196079 compressed) at 0x00000000 in 18.1 seconds (effective 117.7 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...

16 NodeMCU 1.0 (ESP-12E Module) COM4
```

定義 D2 Pin腳為接收 PIR的數值並每1秒列印出來

2. 觀看結果



上圖中，PIR感測到人時，會拉高電位；無人時為低電位