

NodeMCU 在 Arduino IDE 上的 Hello World

硬體：

MicroUSB線 x1

NodeMCU x1

PC-Windows x1

軟體：

Arduino IDE

前置作業：

將 NodeMCU 連接至 PC



1. Arduino 官網安裝 Arduino IDE (以Windows 為例)

<https://www.arduino.cc/en/Main/OldSoftwareReleases>

Previous IDE Releases

The screenshot shows the download page for Arduino IDE 1.8.12. The page includes a brief description of the IDE's compatibility with various Arduino boards like Yun and Due, and links to the Getting Started page and release notes. Below this, there are download links for different operating systems: Windows (with two options: 'Windows Installer' and 'Windows ZIP file for non admin install', where 'Windows ZIP file for non admin install' is highlighted with a red border); Mac OS X; Linux 32 bits; Linux 64 bits; Linux ARM 32; Linux ARM 64; and Source code.

ARDUINO 1.8.12

Arduino IDE that can be used with any Arduino board, including the Arduino Yun and Arduino DUE. Refer to the [Getting Started](#) page for Installation Instructions.
See the [release notes](#).

[Windows Installer](#)
[Windows ZIP file for non admin install](#)

[Mac OS X](#) 10.8 Mountain Lion or newer

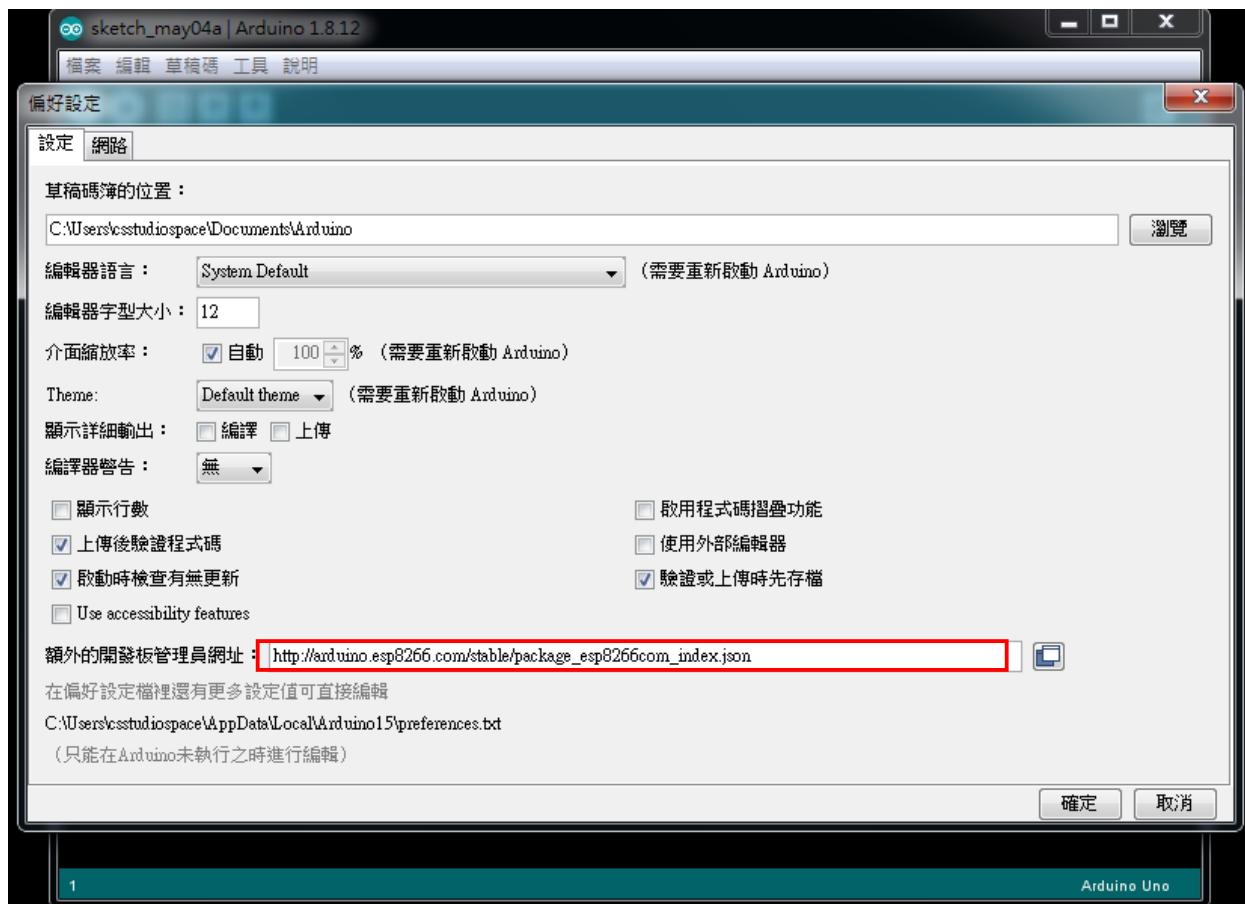
[Linux](#) 32 bits
[Linux](#) 64 bits
[Linux](#) ARM 32
[Linux](#) ARM 64

[Source](#)

2. Arduino IDE 增加額外開發板 - esp8266

在 IDE 左上方，
按檔案 -> 偏好設定 -> 額外開發板管理員網址，輸入

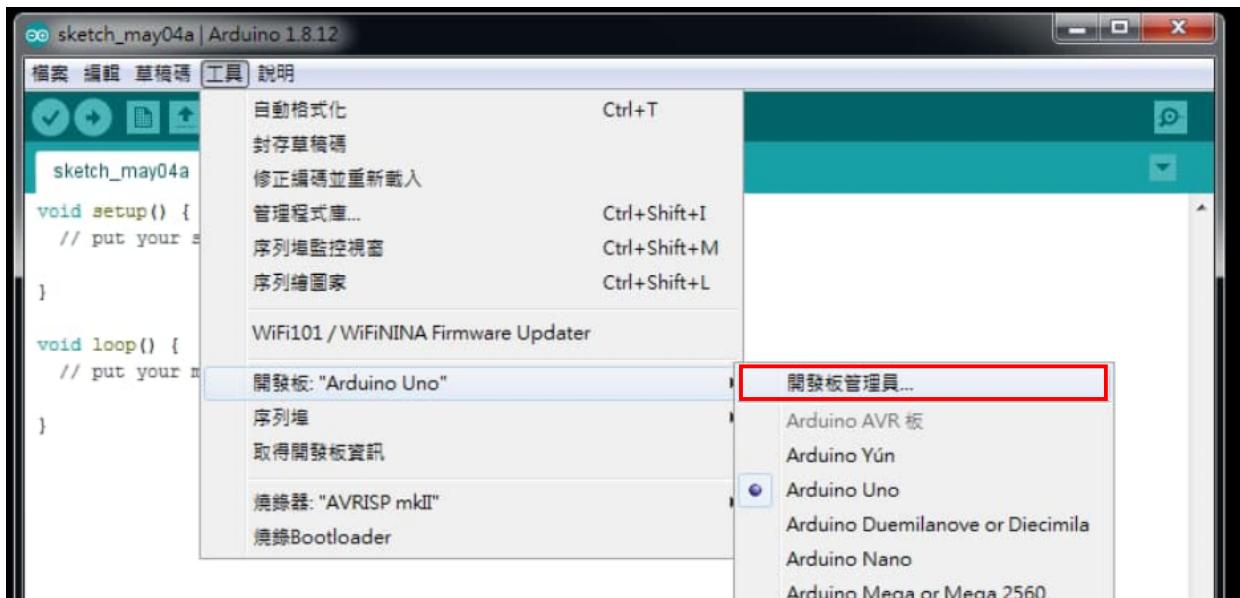
http://arduino.esp8266.com/stable/package_esp8266com_index.json



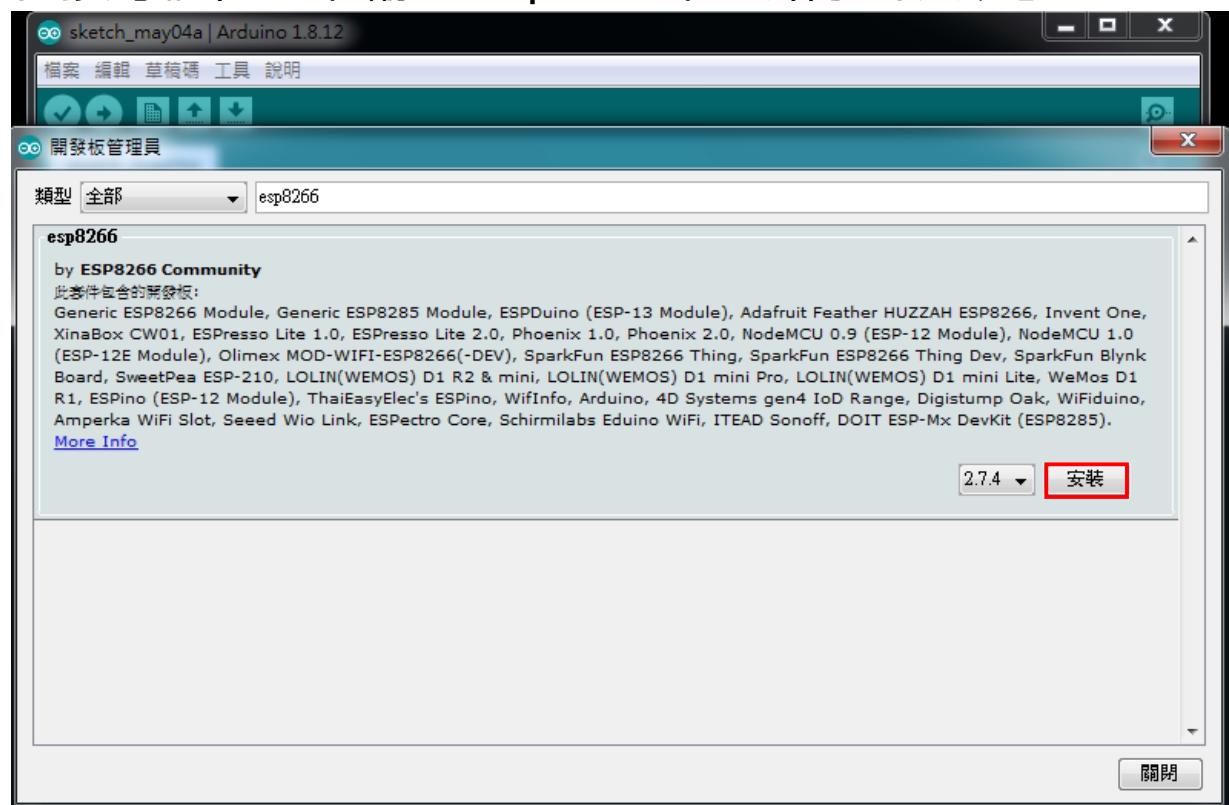
然後按下「確定」。

3. Arduino IDE 匯入 esp8266 SDK包

在IDE上方，
按工具 -> 移至開發板 -> 按下開發板管理員



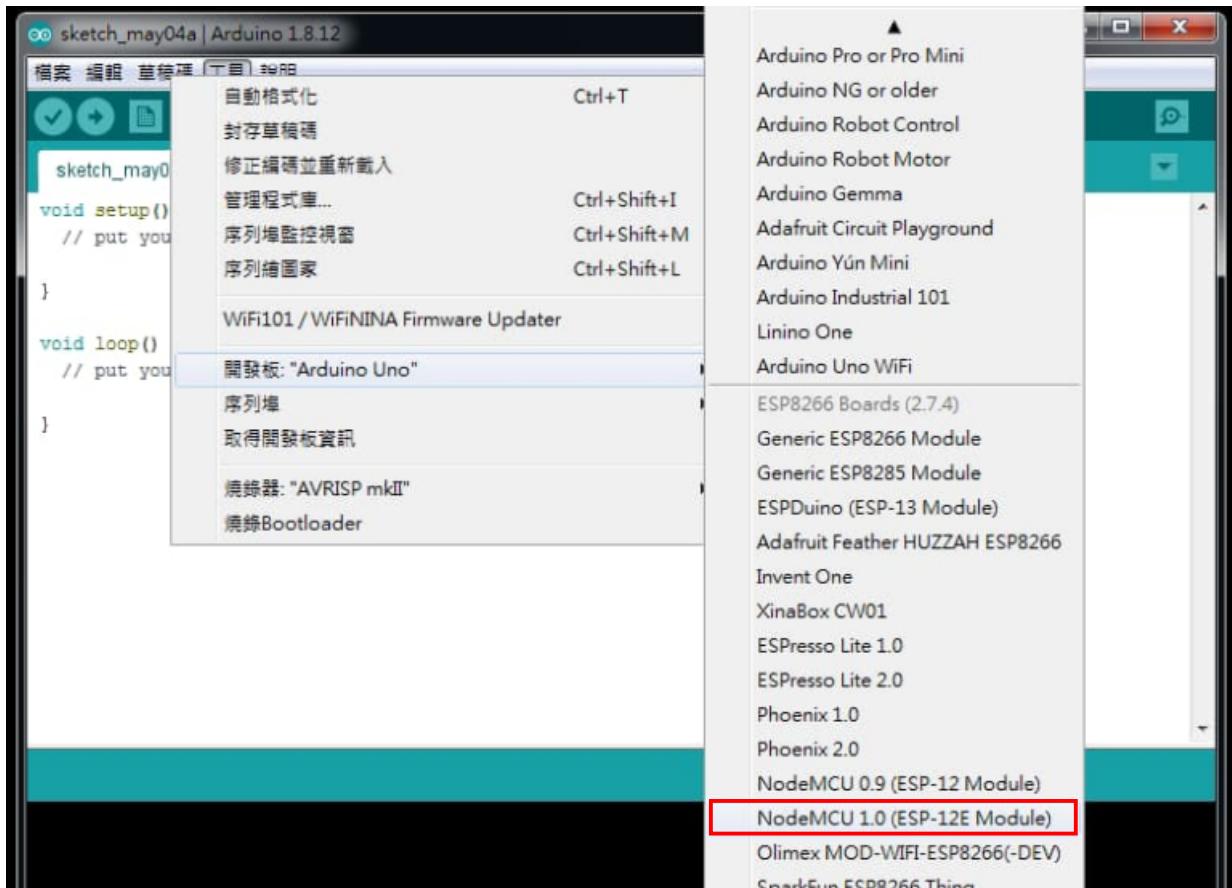
在搜尋欄位上，輸入 esp8266，並點擊「安裝」



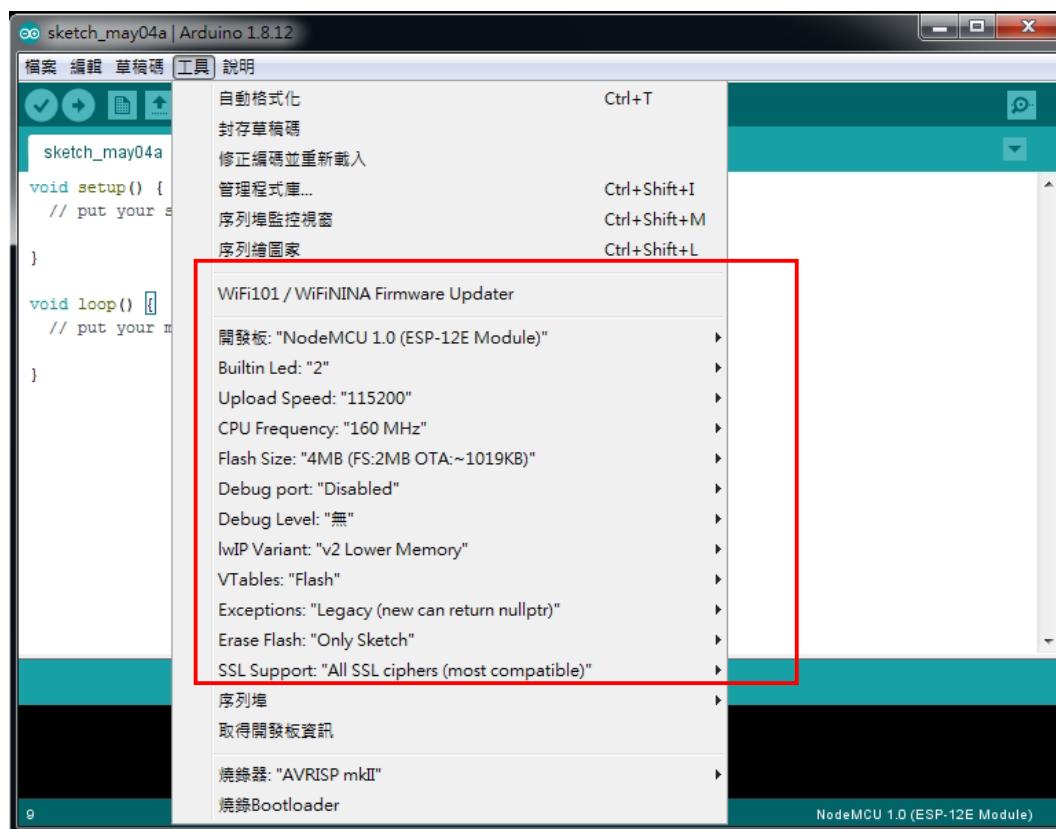
直到安裝結束後點擊關閉，下方有進度條可看。

4. Arduino IDE - NodeMCU 設定

在IDE上方，
按工具 -> 移至開發板 -> 選擇「NodeMCU 1.0」

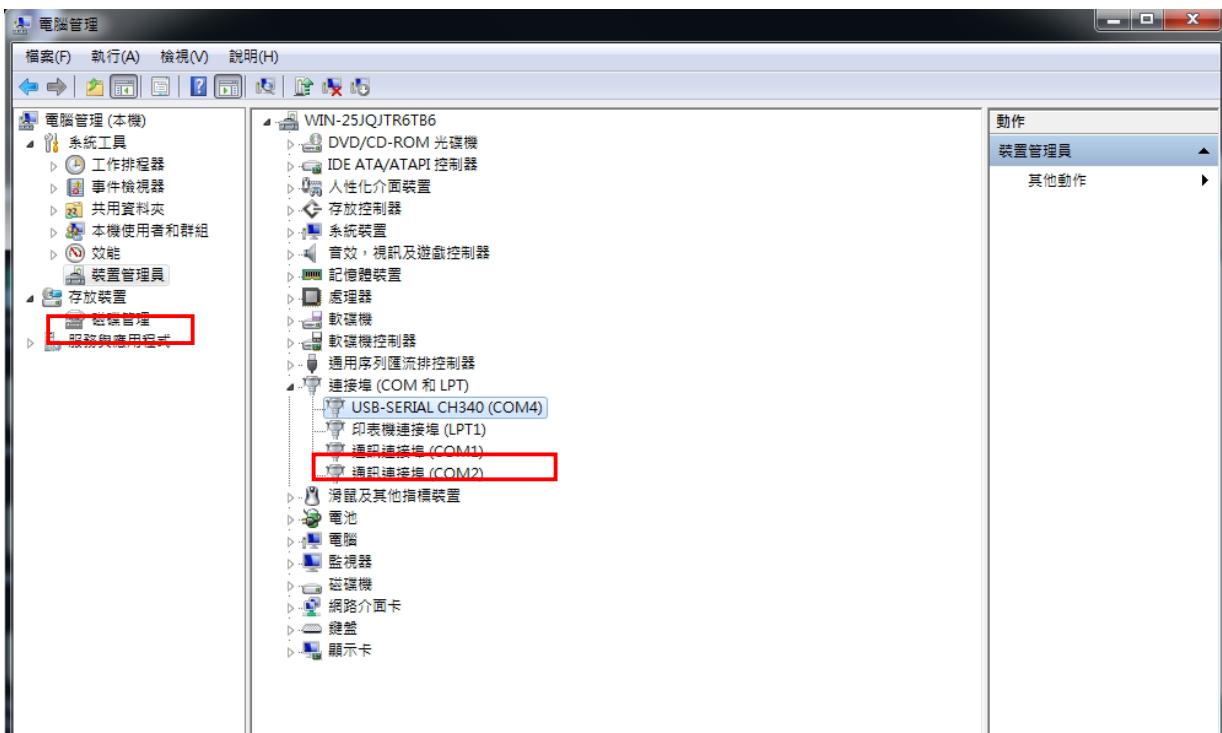


調整 NodeMCU 設定檔如下：



除了紅框處外，
紅框下方序列埠選擇 USB 連到 開發板的 COM Port。

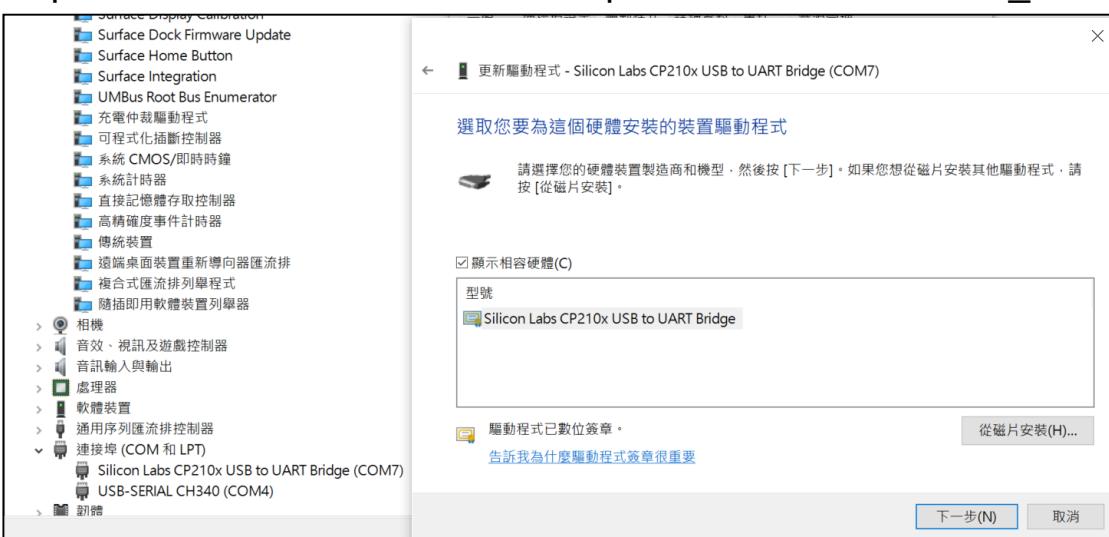
找出開發板 COM Port 的方式如下：
我的電腦 -> 右鍵 -> 管理 -> 裝置管理員 -> 連接埠 ->
USB-SERIAL 裝置(本範例為 COM4)



如果沒看到該裝置，且通用序列匯流排控制器有金嘆號圖示，
安裝下方的驅動程式，即可。

[CP210X]

https://www.silabs.com/documents/public/software/CP210x_Windows_Drivers.zip



[CH340]

https://cdn.sparkfun.com/assets/learn_tutorials/8/4/4/CH341SER.EXE



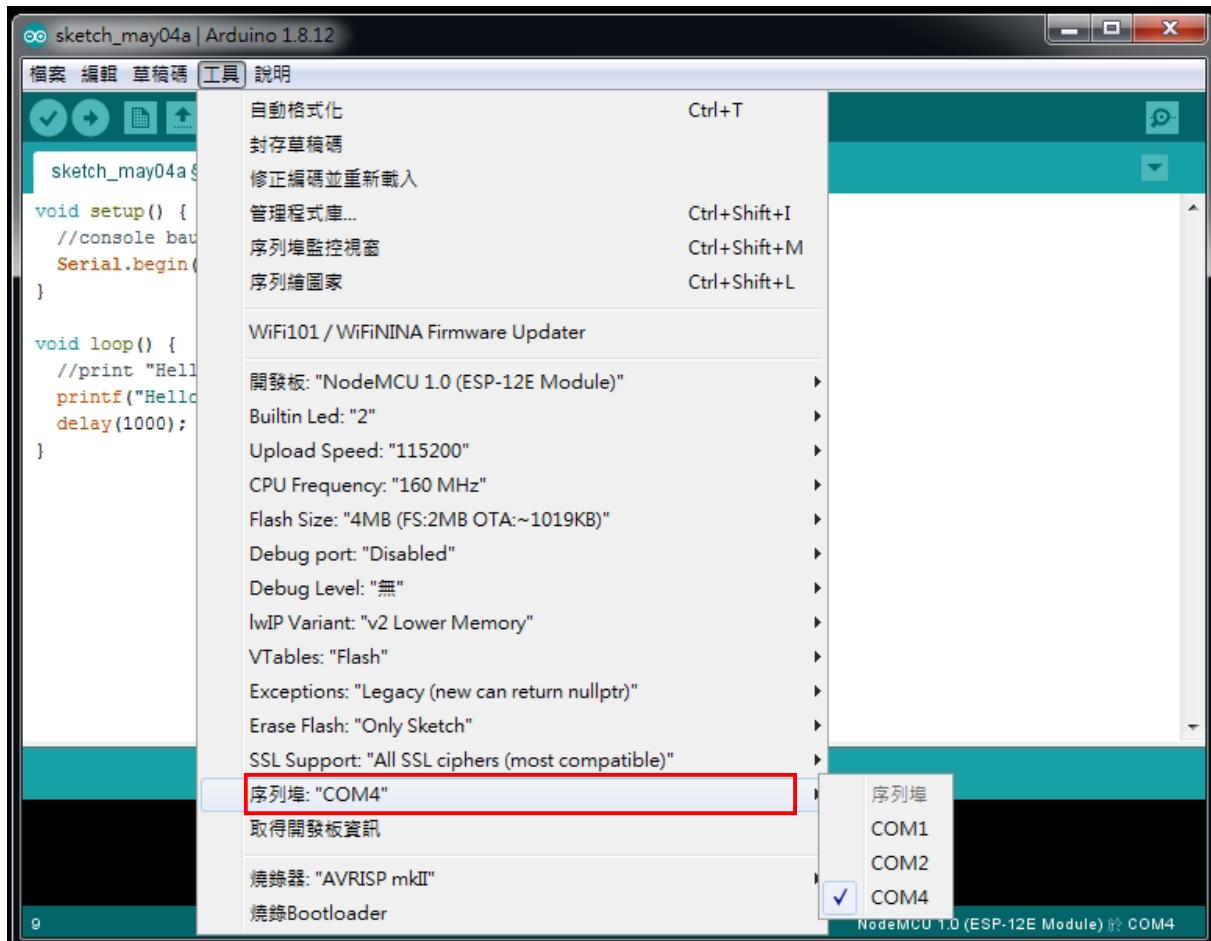
5. 編寫草稿碼 -> 上傳至 NodeMCU 開發板

The Arduino IDE interface is shown with the title bar "sketch_may04a | Arduino 1.8.12". The code editor contains the following "sketch_may04a" code:

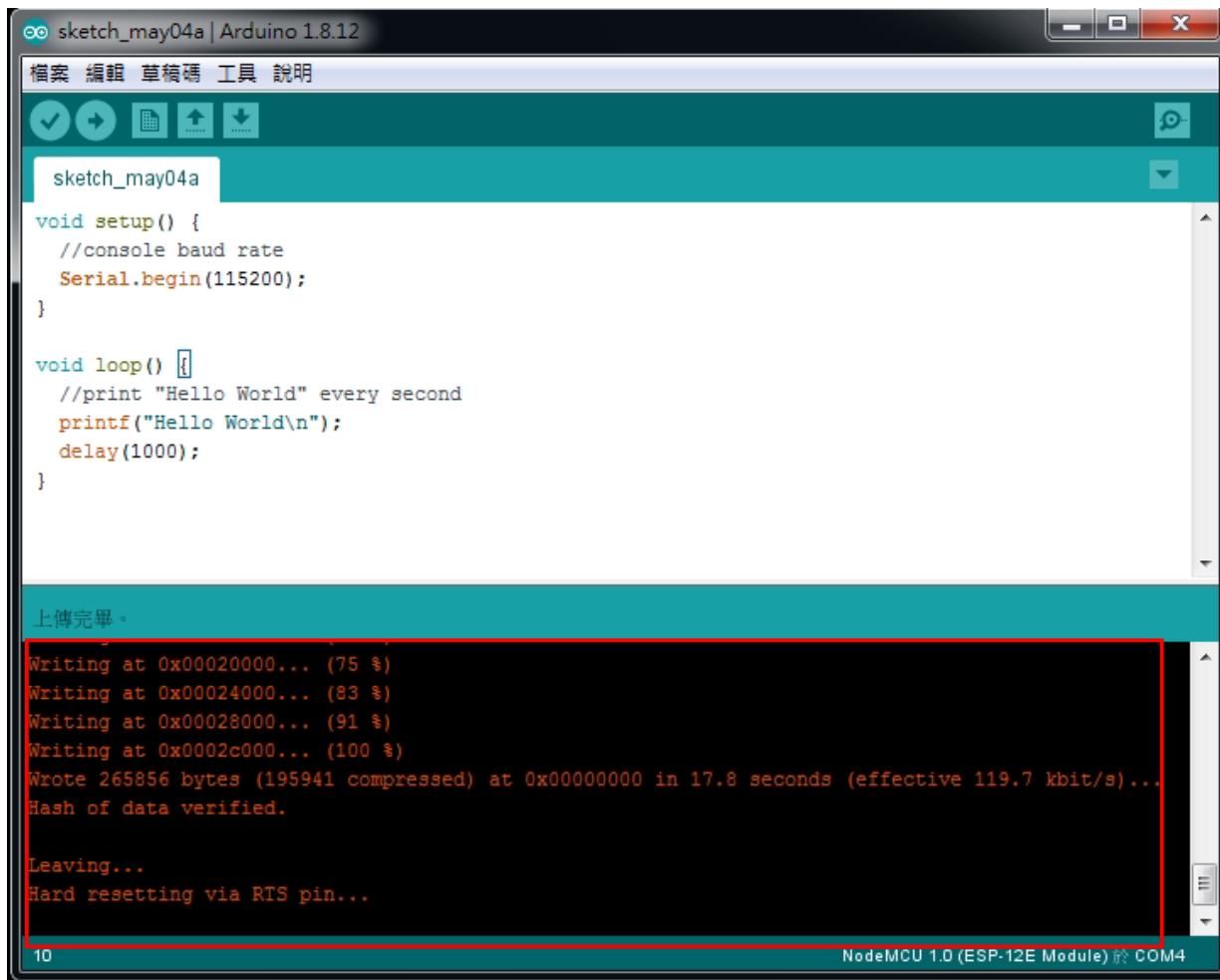
```
void setup() {
  //console baud rate
  Serial.begin(115200);
}

void loop() {
  //print "Hello World" every second
  printf("Hello World\n");
  delay(1000);
}
```

在IDE上方，
工具 -> 序列埠 -> 選 COM4



在IDE上方，
草稿碼 -> 上傳



The screenshot shows the Arduino IDE interface. The top menu bar includes '檔案' (File), '編輯' (Edit), '草稿碼' (Sketch), '工具' (Tools), and '說明' (Help). The main window displays a sketch named 'sketch_may04a' with the following code:

```
sketch_may04a | Arduino 1.8.12
檔案 編輯 草稿碼 工具 說明
sketch_may04a
void setup() {
    //console baud rate
    Serial.begin(115200);
}

void loop() {
    //print "Hello World" every second
    printf("Hello World\n");
    delay(1000);
}
```

The bottom status bar indicates the connection is to 'NodeMCU 1.0 (ESP-12E Module) 於 COM4'.

The central text area shows the upload progress:

```
上傳完畢。
Writing at 0x00020000... (75 %)
Writing at 0x00024000... (83 %)
Writing at 0x00028000... (91 %)
Writing at 0x0002c000... (100 %)
Wrote 265856 bytes (195941 compressed) at 0x00000000 in 17.8 seconds (effective 119.7 kbit/s)...
Hash of data verified.

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

IDE下方出現的訊息，代表已編譯且上傳完成

6. 觀看結果

在IDE上方，
工具 -> 序列埠監控視窗(baud rate 設定為 115200)

