

Chapter 10

FILE

檔案 (File)

在各種程式語言中，有關於開檔、讀檔的檔案存取方式是常被使用到的

Python 使用 `open()` 函數來開啟電腦中的檔案

當檔案開啟後就能進行檔案內容的讀取、寫入或修改等指令

```
File_variable = open("file_name", "mode", [buffering] )
```

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

詳細來解析這個指令

參數	描述
File_variable	檔案變數的名字
file_name	檔案的名字或是檔案路徑
mode	存取檔案的模式 (r, w, a)
buffering	資料的暫存空間, 0 表示沒有暫存空間, 3 表示一次讀入 3 行的資料

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

file_name：檔案的名字，或是檔案路徑

方法	描述
相對路徑	如果沒有路徑給予路徑 Python 會預設要開啟的檔案與程式碼檔位於同一個資料夾
絕對路徑	此檔案在硬碟中實際存位的路徑

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

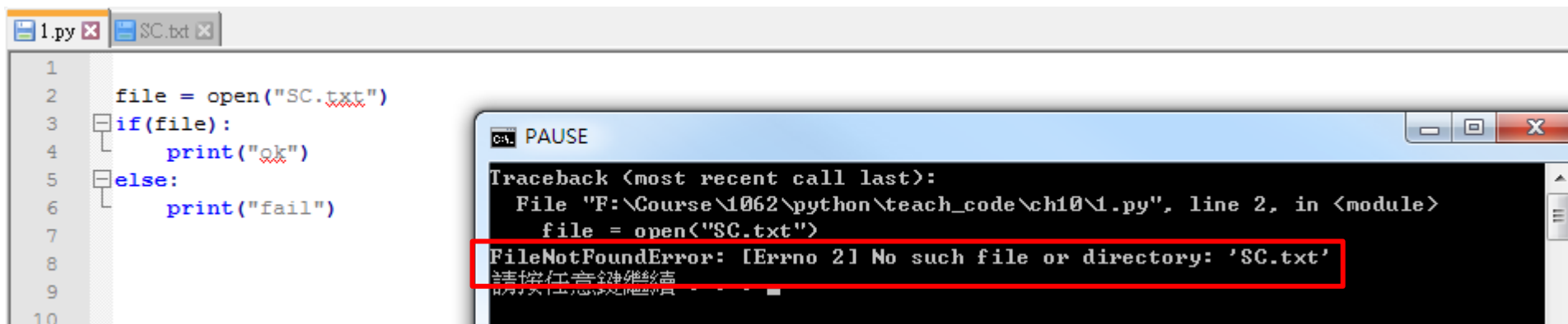
file_name : 檔案的名字，或是檔案路徑

方法	描述
相對路徑	"test.txt"
絕對路徑	"C:\\Code\\python\\ch10\\test.txt"

檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

file_name：檔案的名字，或是檔案路徑（可能會出現相對路徑的錯誤）



The screenshot shows a Python IDE with a file named '1.py' open. The code in the editor is as follows:

```
1 file = open("SC.txt")
2
3 if(file):
4     print("ok")
5 else:
6     print("fail")
7
8
9
10
```

Below the editor, a console window titled 'PAUSE' displays a traceback error:

```
Traceback (most recent call last):
  File "F:\Course\1062\python\teach_code\ch10\1.py", line 2, in <module>
    file = open("SC.txt")
FileNotFoundError: [Errno 2] No such file or directory: 'SC.txt'
```

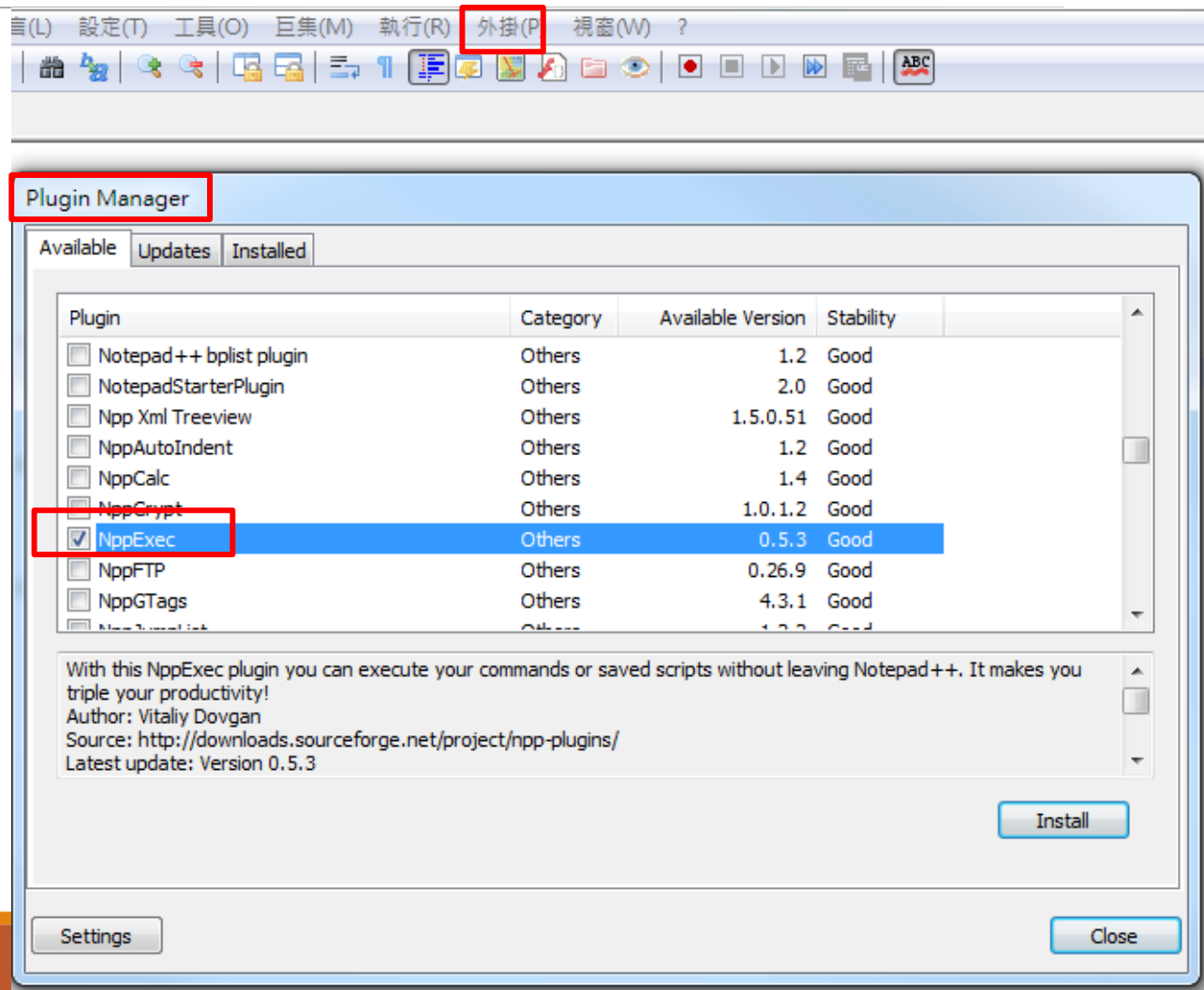
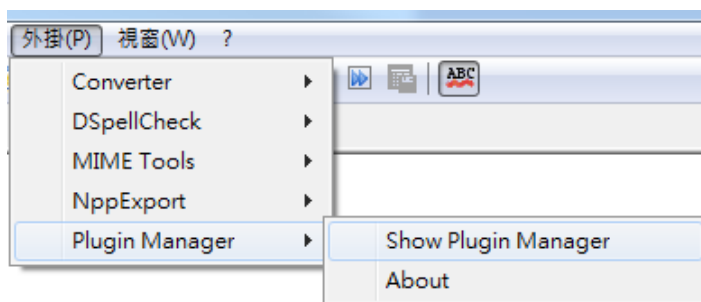
The error message is highlighted with a red box.

找不到檔案怎麼辦

檔案 (File)

(解決方式)

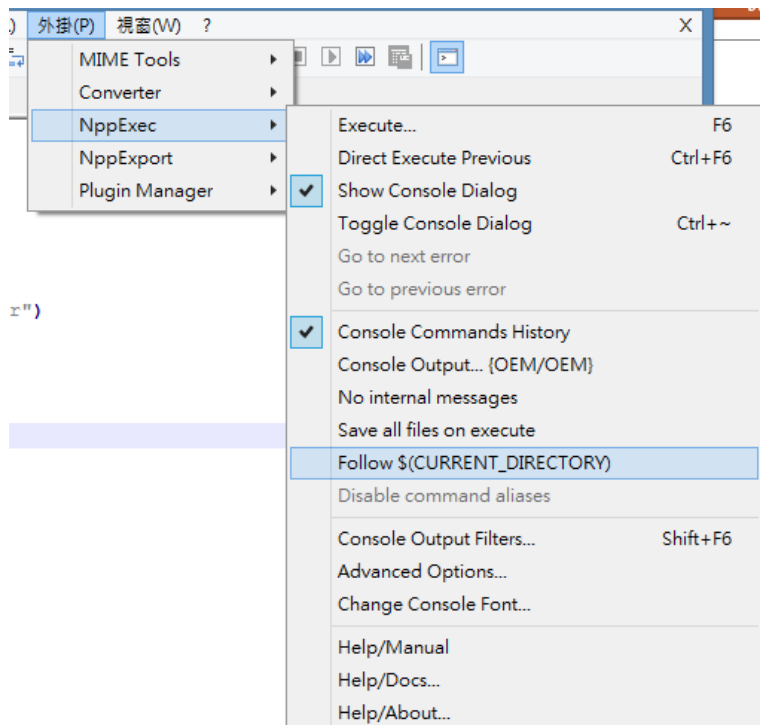
1. 安裝 NppExec



檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

(解決方式)



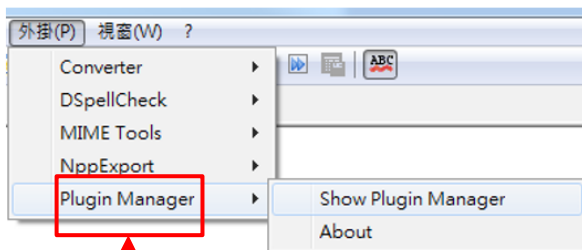
2. 外掛 -> NppExec ->
Follow \$(CURRENT_DIRECTORY) 打
勾

3. 關掉 Notepad++ 再打開

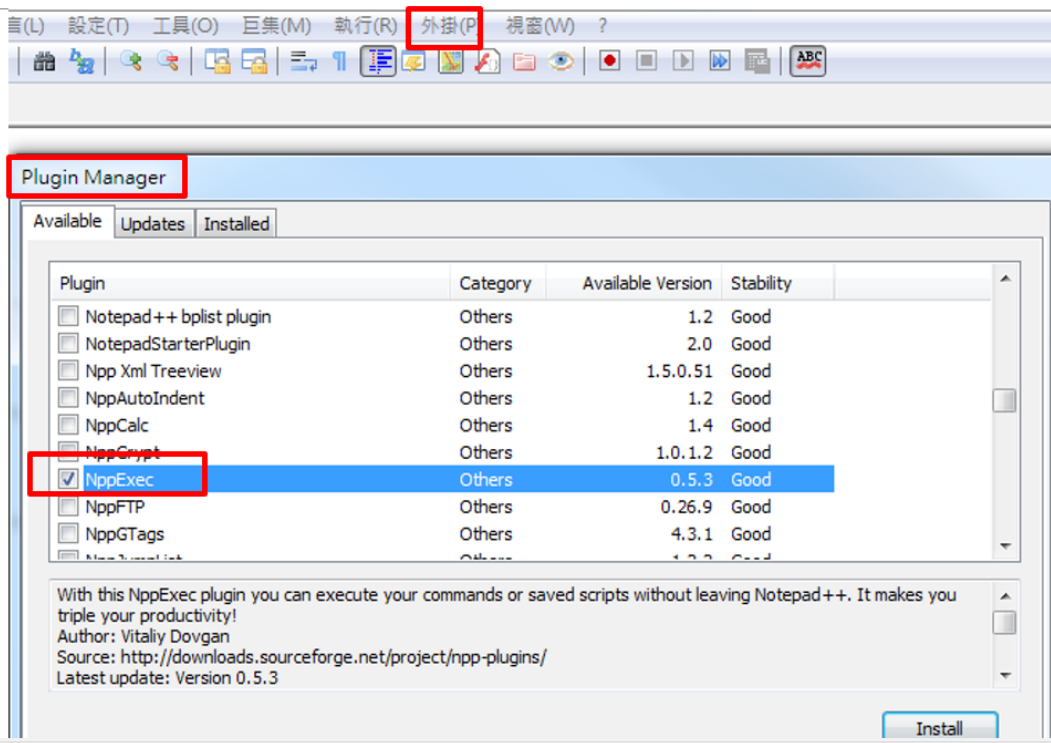
檔案 (File)

檔案(File)

(解決方式 2)



缺少 plugin
Manager



檔案 (File)

從 <https://github.com/bruderstein/nppPluginManager/releases>

下載 PluginManager_v1.4.9_UNI.zip, 解壓縮之後兩個檔案分別為 plugins 和 updater 資料夾

(解決方式 2)


v1.4.9


 bruderstein released this on 16 Apr 2017

Assets

 [PluginManager_v1.4.9_UNI.zip](#)

 [PluginManager_v1.4.9_x64.zip](#)

 [Source code \(zip\)](#)

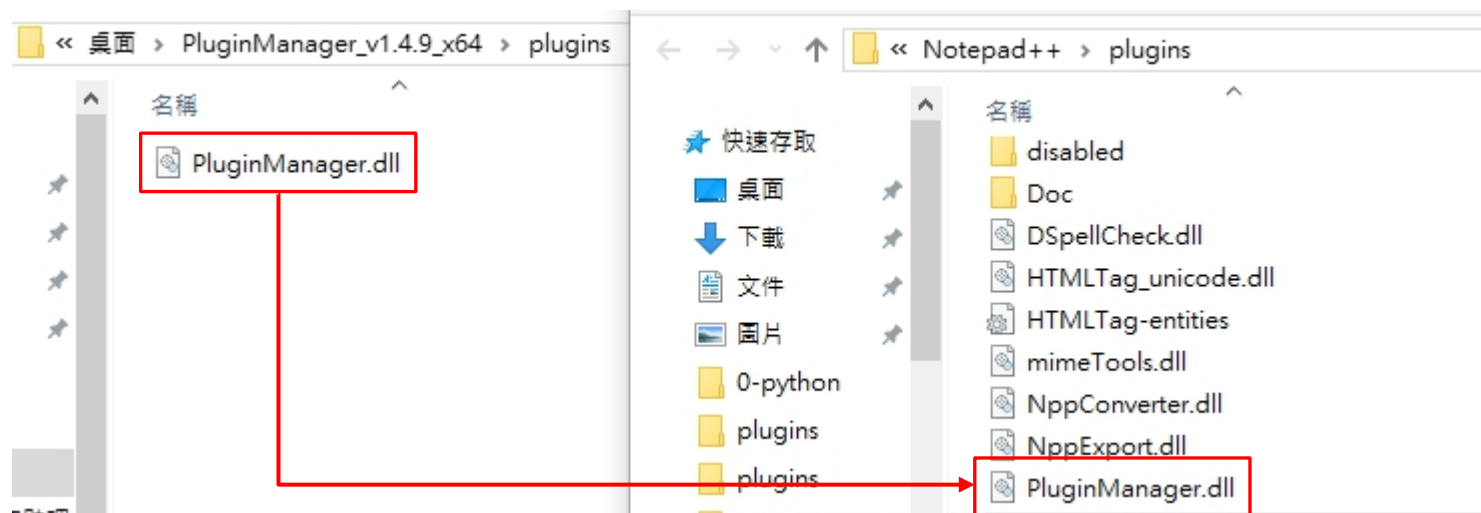
 [Source code \(tar.gz\)](#)

PluginManager_v1.4.9_UNI		
名稱	修改日期	類型
plugins	2017/4/15 下午 0...	檔案資料夾
updater	2017/4/15 下午 0...	檔案資料夾

檔案 (File)

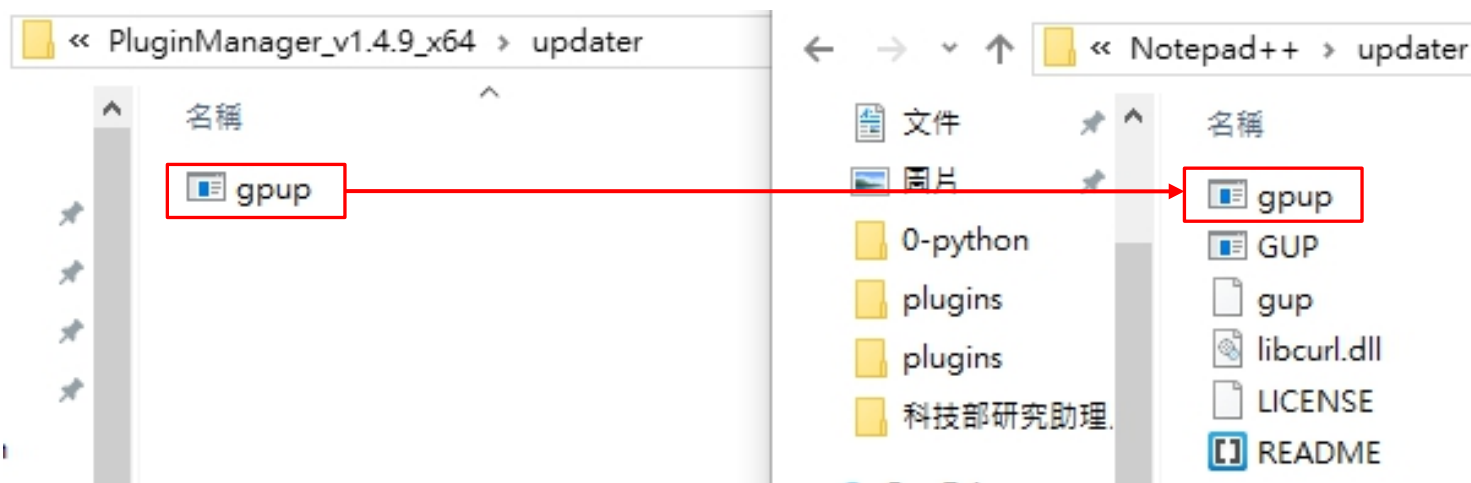
將 plugins 下的 PluginManager.dll 放到

C:\Program Files(x86)\Notepad++\plugins (解決方式 2)



檔案 (File)

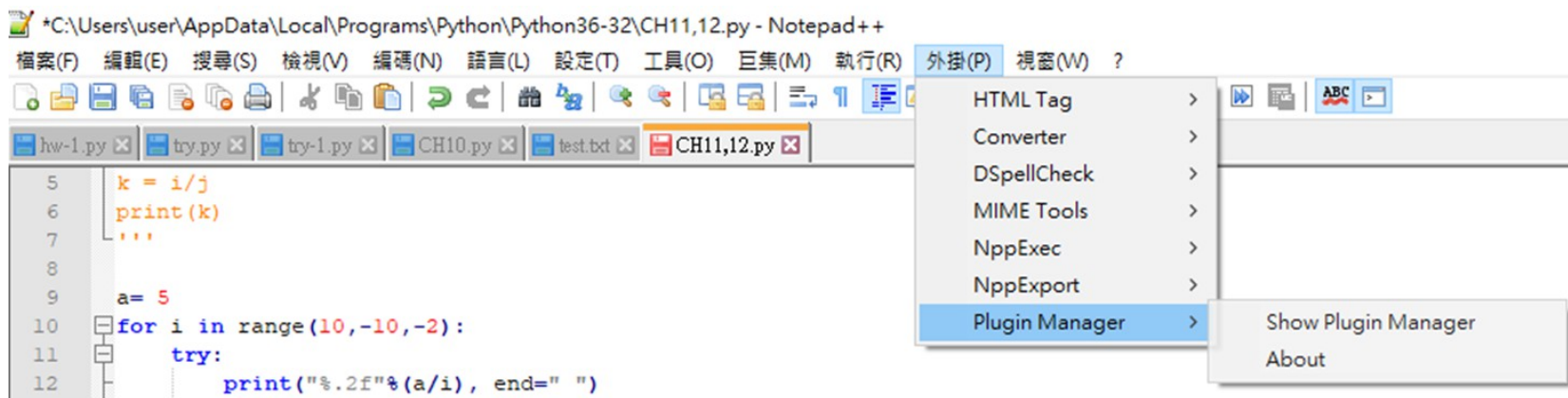
再將 updater 下的 gpup.exe 放在 C:\Program Files (x86)\Notepad++\updater
(解決方式 2)



檔案 (File)

路徑調整後 , Plugin Manager 即可使用。

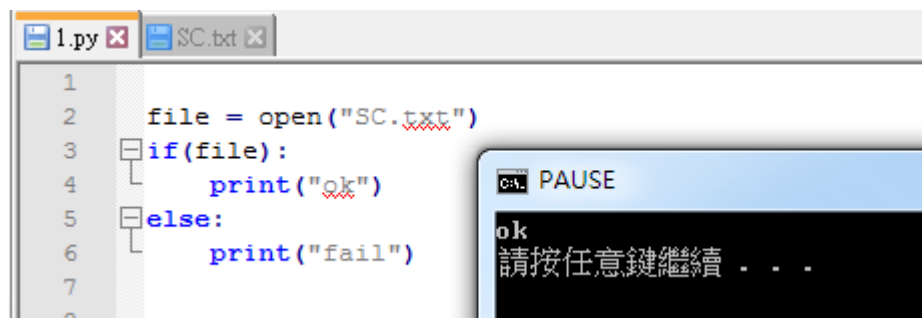
(解決方式 2)



檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

測試



The screenshot shows a Python IDE with two tabs: '1.py' and 'SC.txt'. The code in '1.py' is as follows:

```
1
2 file = open("SC.txt")
3 if(file):
4     print("ok")
5 else:
6     print("fail")
7
8
```

Below the code editor, a console window is visible with the following output:

```
C:\> PAUSE
ok
請按任意鍵繼續 . . .
```

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

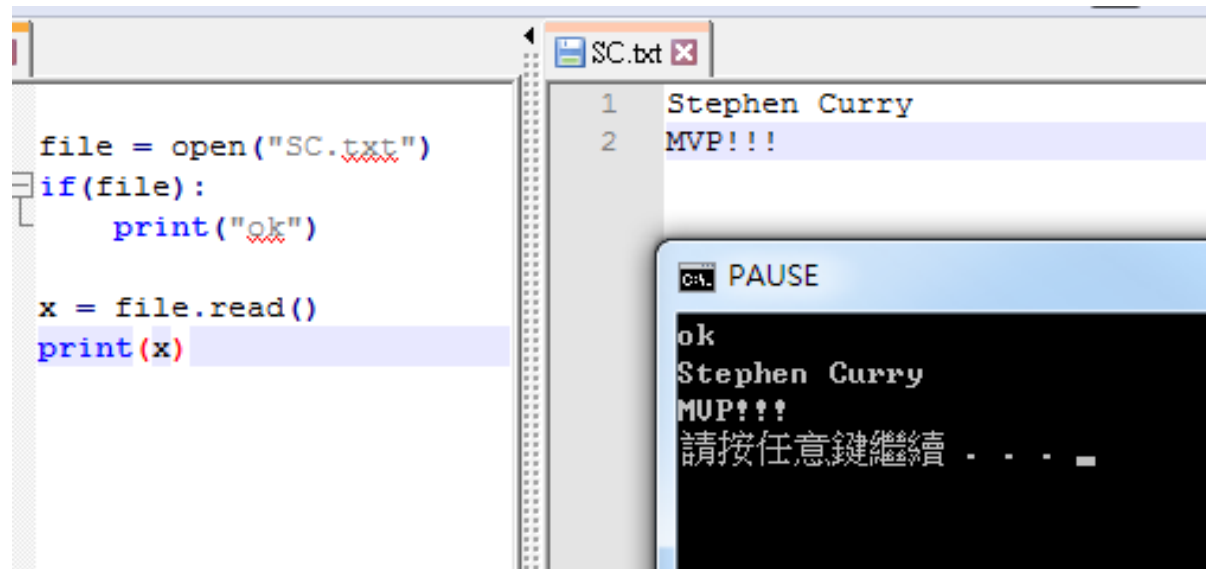
存取檔案的三種動作

存取檔案	方法
讀檔	read() readline() readlines()
寫檔	write() writeline() writelines()
關檔	close()

檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

read()



The screenshot shows a Python IDE with a file named 'SC.txt' open. The code in the editor is as follows:

```
file = open("SC.txt")
if(file):
    print("ok")

x = file.read()
print(x)
```

The file 'SC.txt' contains the following text:

```
1 Stephen Curry
2 MVP!!!
```

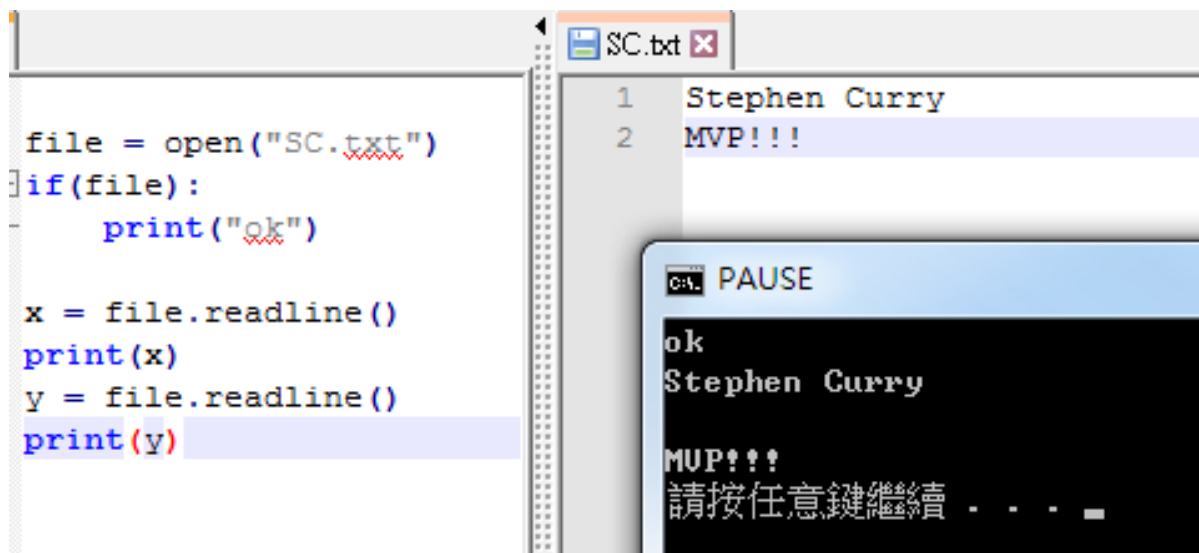
A terminal window titled 'PAUSE' is overlaid on the code, showing the output of the program:

```
ok
Stephen Curry
MVP!!!
請按任意鍵繼續 . . .
```


檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

readline()



The screenshot shows a Python script in a text editor and its execution output in a terminal window. The script opens a file named 'SC.txt', checks if it's open, prints 'ok', and then reads two lines from the file, printing them. The terminal output shows 'ok', 'Stephen Curry', and 'MVP!!!', followed by a prompt to press any key to continue.

```
file = open("SC.txt")
if(file):
    print("ok")

x = file.readline()
print(x)
y = file.readline()
print(y)
```

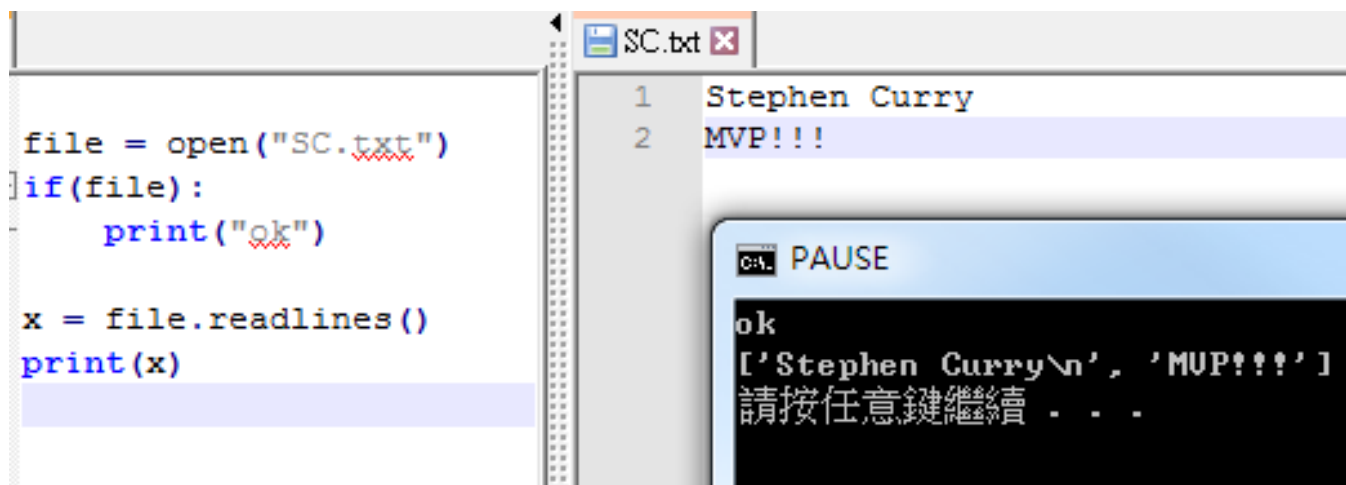
```
1 Stephen Curry
2 MVP!!!

PAUSE
ok
Stephen Curry
MVP!!!
請按任意鍵繼續 . . .
```

檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

readlines()



The screenshot shows a Python script on the left and its execution output on the right. The script opens a file named 'SC.txt', checks if it exists, prints 'ok', and then reads all lines into a list 'x' which it prints. The output window shows the file's contents: 'Stephen Curry' and 'MVP!!!', followed by a list representation of these lines and a pause prompt.

```
file = open("SC.txt")
if(file):
    print("ok")

x = file.readlines()
print(x)
```

```
1 Stephen Curry
2 MVP!!!

PAUSE
ok
['Stephen Curry\n', 'MVP!!!']
請按任意鍵繼續 . . .
```

檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

readlines()

The image shows a Python script on the left and its execution output on the right. The script opens a file named 'SC.txt' with UTF-8 encoding and prints its contents line by line. The output window shows the file's name and the text 'Stephen Curry MVP!!!' followed by Chinese characters '安安 幾歲 給虧嗎' and '!!!'. A 'PAUSE' dialog box is also visible over the output.

```
file = open("SC.txt", encoding = 'utf8')
if(file):
    print("ok")

x = file.name
print("File name %s" %(x) )
for i in file.readlines():
    print(i)
```

SC.txt x

```
1 Stephen Curry
2 MVP!!!
3 --
4 安安
5 幾歲
6 給虧嗎
7 !!!
```

PAUSE

ok
File name SC.txt
Stephen Curry

MVP!!!

--
安安
幾歲
給虧嗎
!!!
請按任意鍵繼續 . . .

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

readline() vs readlines()

readline() 比 readlines() 執行時間慢許多，因為 readline() 一次只讀取一行

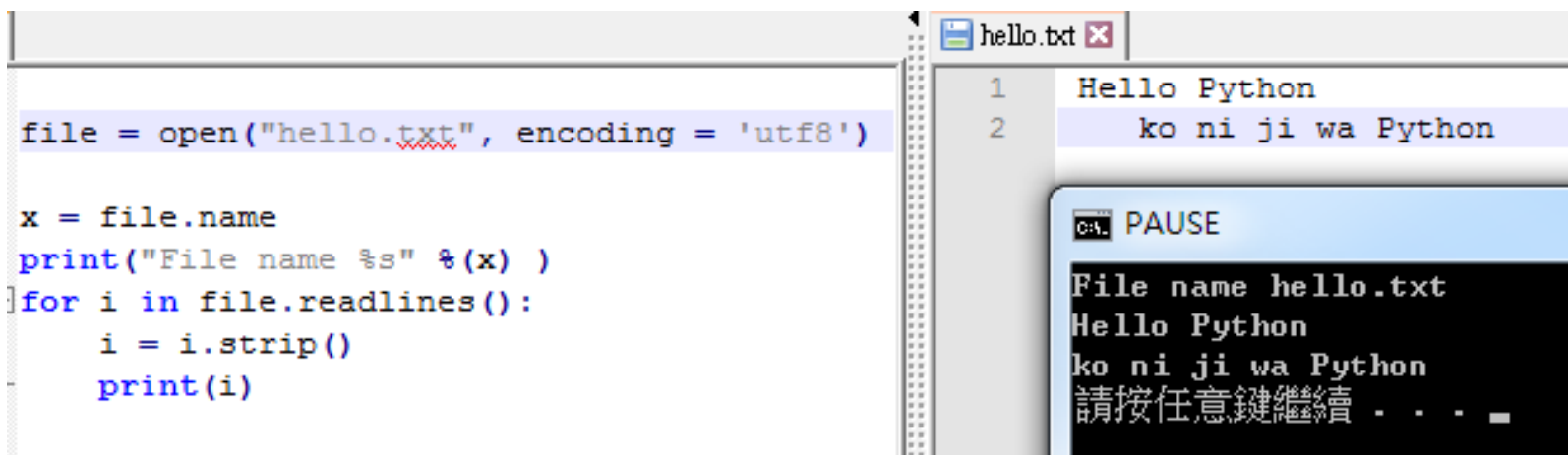
建議使用 readlines() 一次讀取完整份文件，再用迴圈逐行進行處理

檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

strip() :

好用的處理檔案的函數，可以去掉每行頭尾空白的部份



```
file = open("hello.txt", encoding = 'utf8')

x = file.name
print("File name %s" % (x) )
for i in file.readlines():
    i = i.strip()
    print(i)
```

hello.txt

```
1 Hello Python
2 ko ni ji wa Python
```

PAUSE

```
File name hello.txt
Hello Python
ko ni ji wa Python
請按任意鍵繼續 . . .
```

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

mode：存取檔案的模式

模式	描述
r	以 唯讀 方式打開文件，游標在文件的開頭
r+	打開一個文件用於 讀寫 ，游標在文件的開頭
w	打開一個文件並且只 能寫入 該文件已存在則將其覆蓋，若不存在，則建立新文件
w+	打開一個文件並能夠 讀寫 如果該文件已存在則將其覆蓋，若不存在，則建立新文件

檔案 (File)

```
File_variable = open("file_name", "mode", [buffering])
```

mode：存取檔案的模式

模式	描述
a	打開一個文件並且限定為 新增資料 該文件若存在，游標將在 結尾 ，新增的內容會被寫入到結尾後 如果該文件不存在，建立新文件再進行寫入
a+	打開一個文件並且能夠讀寫 該文件若存在，游標將在 結尾 ，新增的內容會被寫入到結尾後 如果該文件不存在，建立新文件再進行讀寫

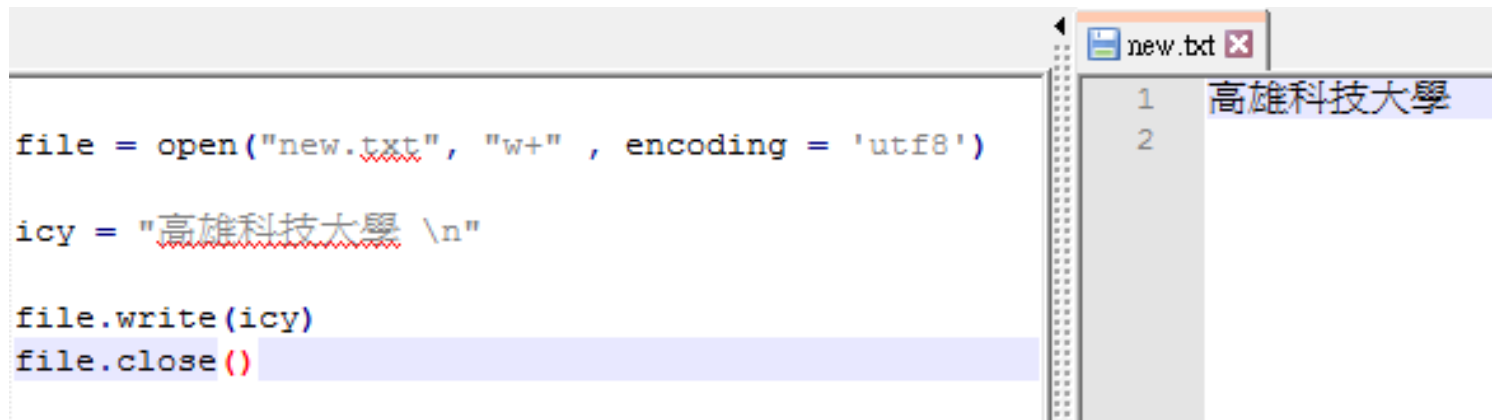
檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

write()

write() 函數可將任何字串寫入目前已經被打開的檔案。

write() 不會自動在結尾中加分行符號 **"\n"**，要換行則自行加上分行符號



```
file = open("new.txt", "w+", encoding = 'utf8')  
  
icy = "高雄科技大學 \n"  
  
file.write(icy)  
file.close()
```

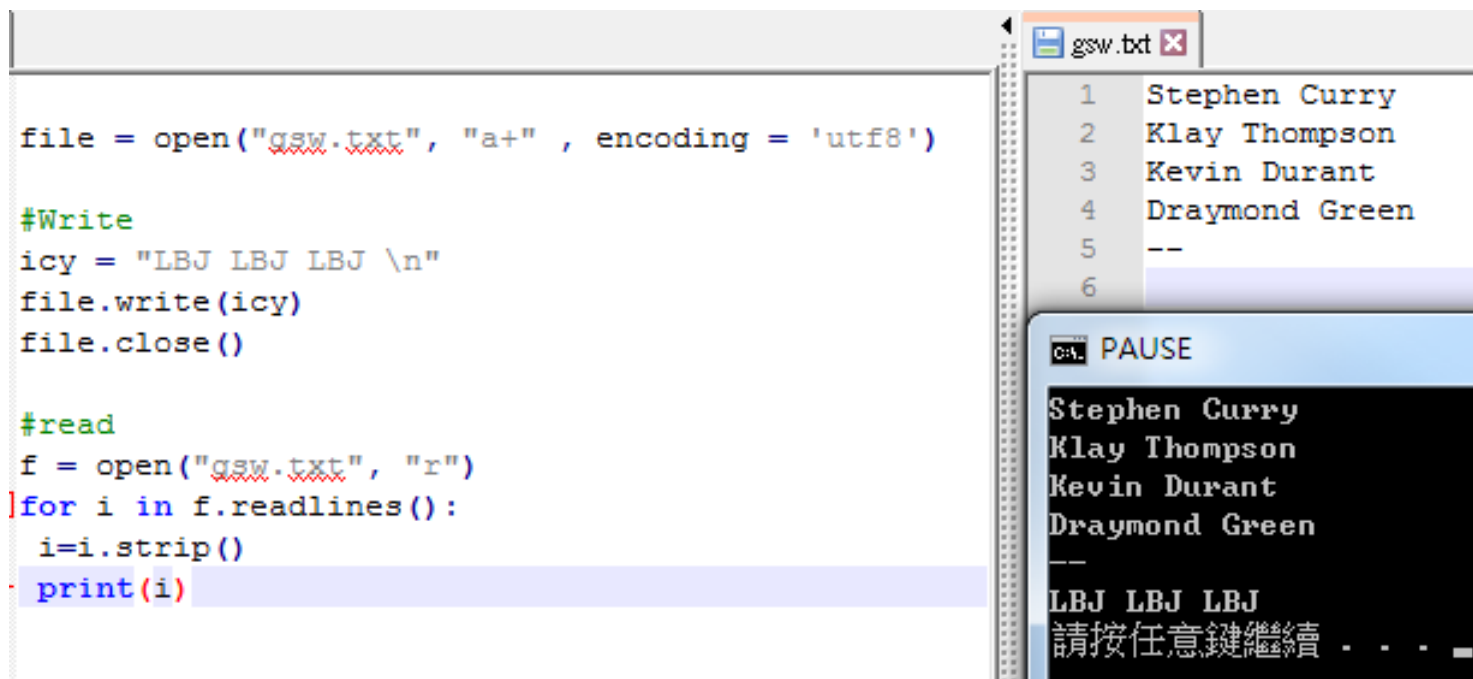
The screenshot shows a code editor with the above Python code. To the right, a preview of the file 'new.txt' is shown with two lines: '1 高雄科技大學' and '2'.

不洗掉檔案 再持續加文字怎麼處理

檔案 (File)

File_variable = **open**("file_name", "mode", [buffering])

write("filename", "a+")



The screenshot displays a Python IDE with a code editor on the left and a console on the right. The code in the editor opens a file named 'gsw.txt' in append mode ('a+') with UTF-8 encoding, writes the text 'LBJ LBJ LBJ \n', and then closes the file. It then opens the same file in read mode ('r') and prints each line. The console on the right shows the output of these operations, listing the names of four players and the text 'LBJ LBJ LBJ' followed by a prompt to press any key to continue.

```
file = open("gsw.txt", "a+" , encoding = 'utf8')

#Write
icy = "LBJ LBJ LBJ \n"
file.write(icy)
file.close()

#read
f = open("gsw.txt", "r")
for i in f.readlines():
    i=i.strip()
    print(i)
```

gsw.txt

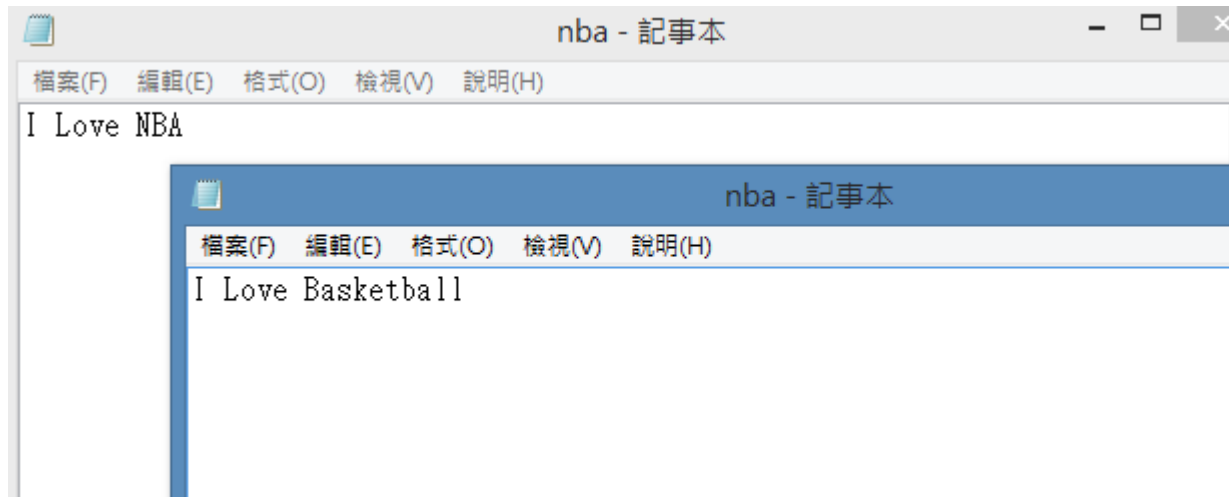
```
1 Stephen Curry
2 Klay Thompson
3 Kevin Durant
4 Draymond Green
5 --
6
```

PAUSE

```
Stephen Curry
Klay Thompson
Kevin Durant
Draymond Green
--
LBJ LBJ LBJ
請按任意鍵繼續 . . .
```

隨堂練習

1. 打開一個文件寫入 I Love NBA
2. 再打開一次文件將 NBA 改成 Basketball



Any Questions !?