科學計算程式設計實習

Python Facebook SDK

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什麼是 Graph API

- Graph API 是 Facebook 所推出的一種技術標準
- 核心概念是：「物件與連結」
- Facebook 將整個社群抽象為物件與物件之間連結的圖

- 整個 Facebook 就是透過物件與連結建立而成的 Social Graph
- Facebook 所提供存取的介面，就稱為「Graph API」

如何使用 Graph API

- Facebook 提供給外部程式存取的方式就是URL
- 如果以 Javascript 實作就是透過 Ajax
- Java 可以用 HttpConnection 或直接用 HttpClient 的 API

- 簡單而言就是「透過 Http 的 Request 」
- 發出請求的 URL 格式如下，「ID 為物件 id，CONNECTION_TYPE 為物件連結的種類」

https://graph.facebook.com/ID/CONNECTION_TYPE

- 而 Facebook 會給 Json format 的回傳內容
- 以 User 物件而言，在沒有授權的情況下，能夠存取到以下這些欄位：


```
{
   "id": "100000274774093",
   "name": "林蔚儒",
   "first_name": "蔚儒",
   "last_name": "林",
   "link": "https://www.facebook.com/rusiasia",
   "username": "rusiasia",
   "gender": "male",
   "locale": "zh_TW"
}
```

- 如果沒有授權，會出現這樣的回傳結果：


```
{
  "error": {
    "message": "(#604) Can't lookup all friends of 10000559192. Can only lookup
        for the logged in user or the logged in user's friends that are users of your
app.",
    "type": "OAuthException",
    "code": 604
  }
}
```

App Development

APIs and SDKs

Graph API
- Using the Graph API
- Reference
- Common Scenarios
- Other APIs
- Advanced

iOS SDK

Android SDK

JavaScript SDK

PHP SDK

Unity SDK

The Graph API

The primary way for apps to read and write to the Facebook social graph. The Graph API has multiple versions available, read about what has changed and how to upgrade from older versions.

Overview
Learn how the Graph API is structured, how versioning works and what access tokens are.

Using the Graph API
Learn how to publish to and retrieve data from Facebook using the Graph API.

API Reference
Get the full details of all the nodes, edges, and fields in the latest version of the Graph API.

Graph API and SDKs
Learn how to use our iOS, Android, JavaScript, PHP SDKs with the Graph API. Third-party SDKs are also available.

Staying up to date

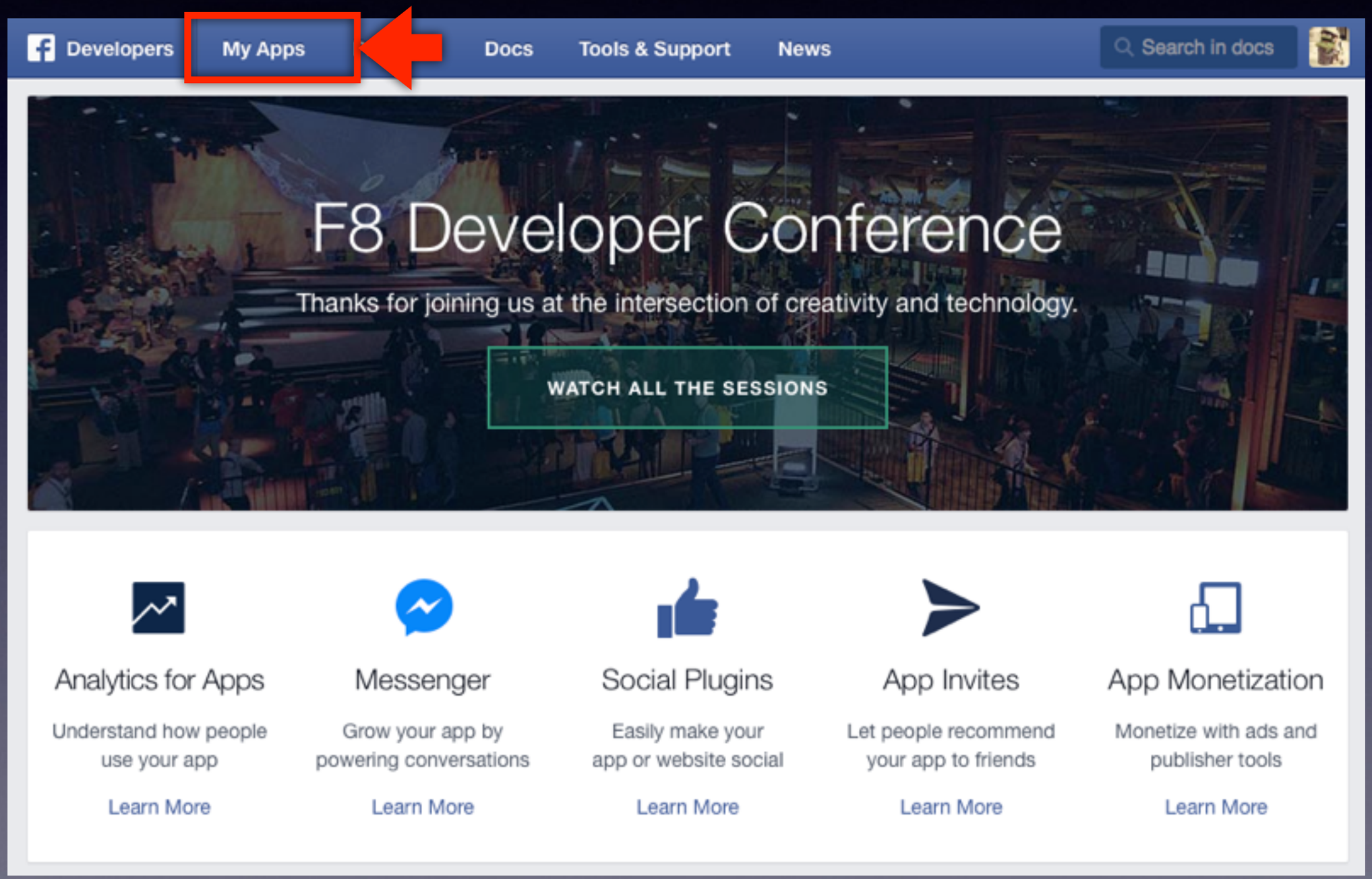
The current, latest version of the Graph API is v2.3. Apps calling v1.0 have until April 30, 2015 to upgrade to v2.0 or later.

https://developers.facebook.com/docs/graph-api

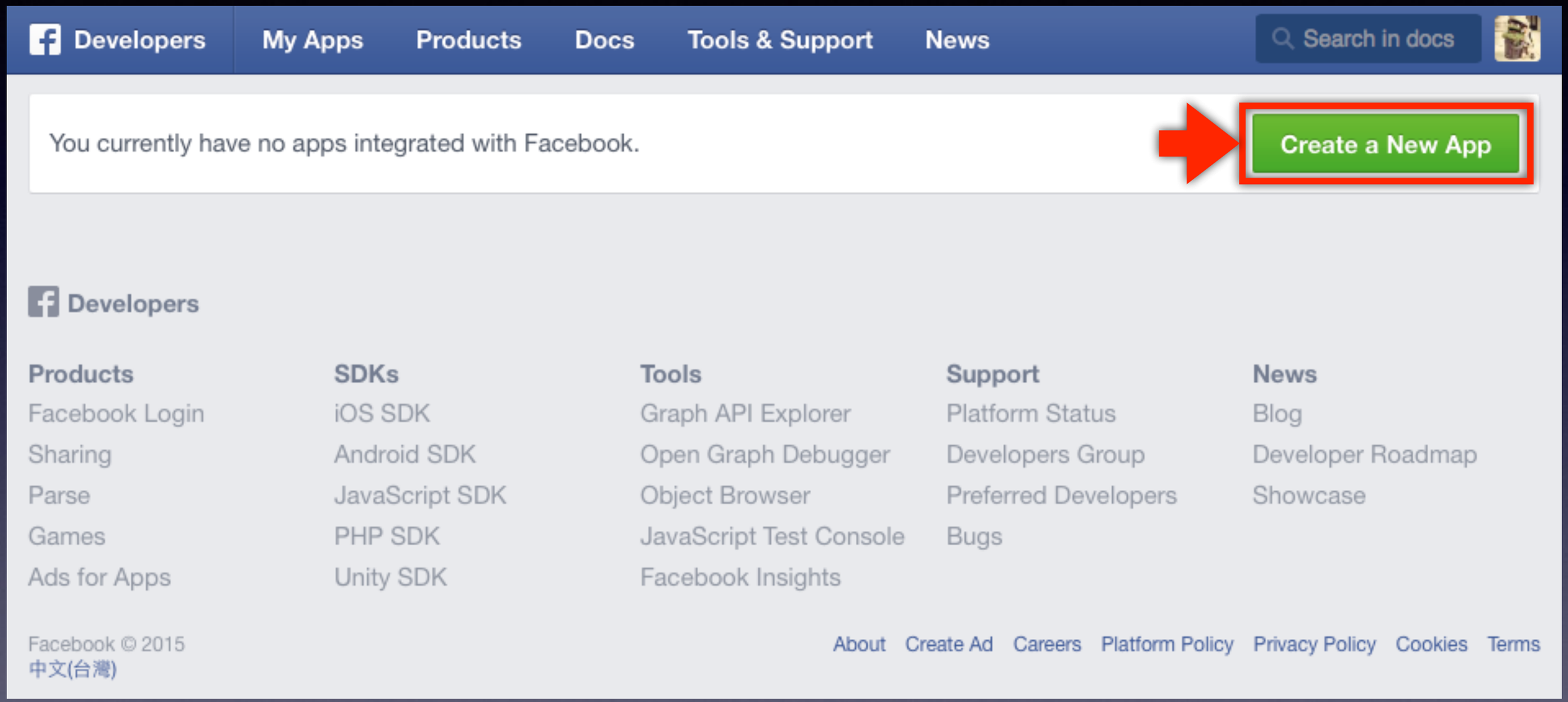
建立 Facebook app

- 登入 Facebook（http://www.facebook.com）

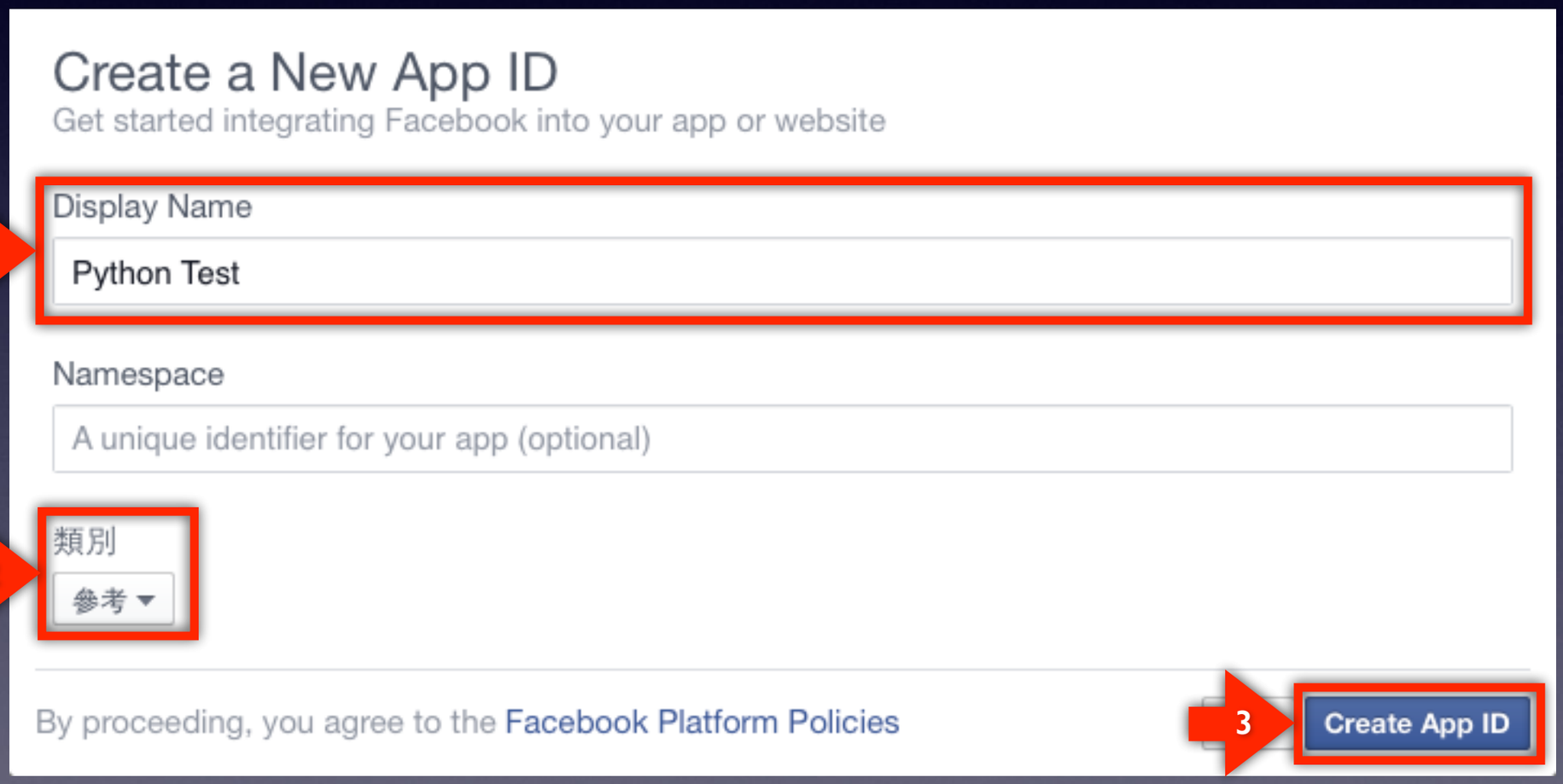
- 進入 Facebook Developer 頁面（https://developers.facebook.com）後點選 “My Apps” 選項



- 點選 “Create a New App”



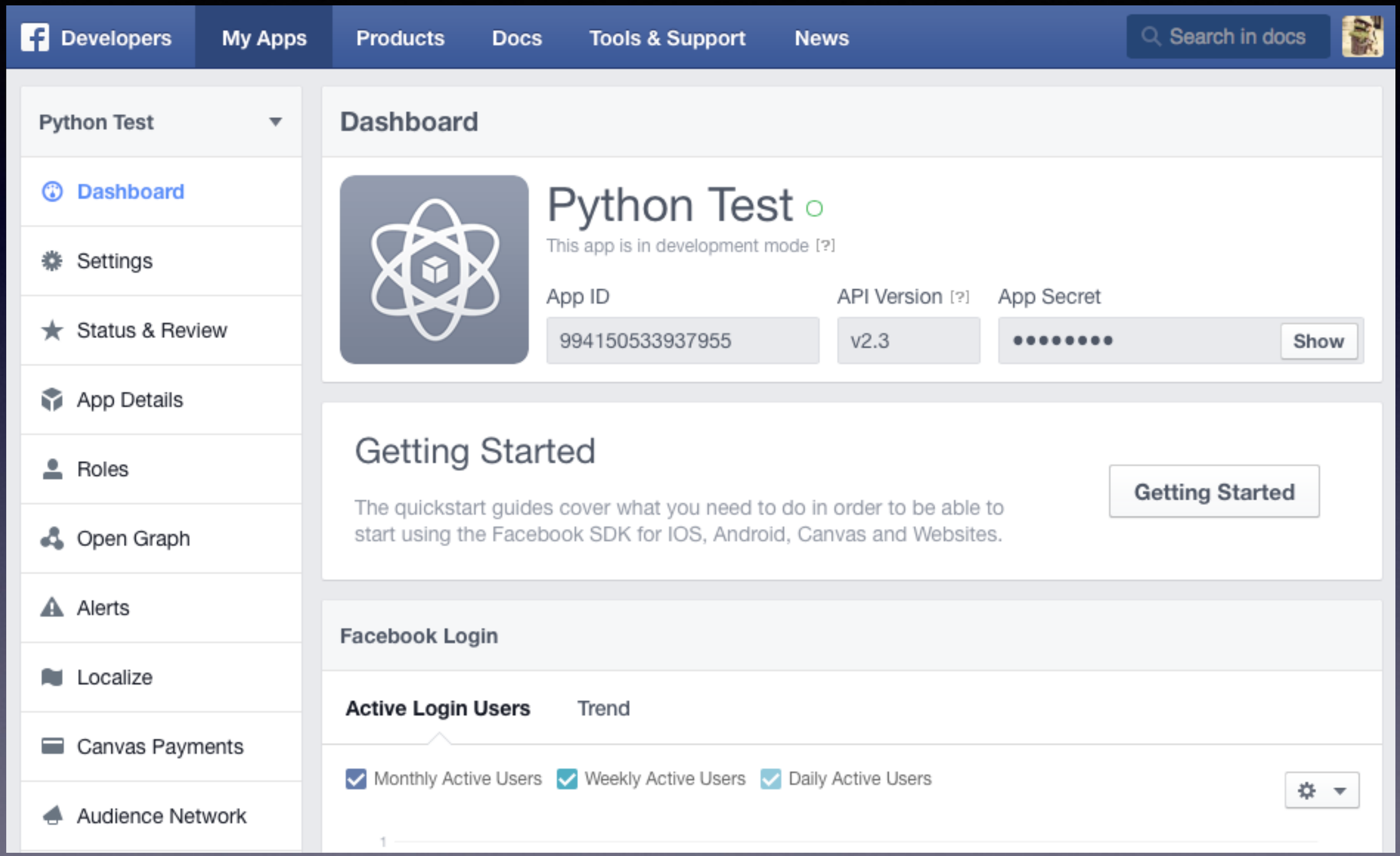
- Display Name 輸入 Python Test
- 類別 選擇 ”參考” 後點 “Create App ID”



- 安全驗證 後點選”送出”

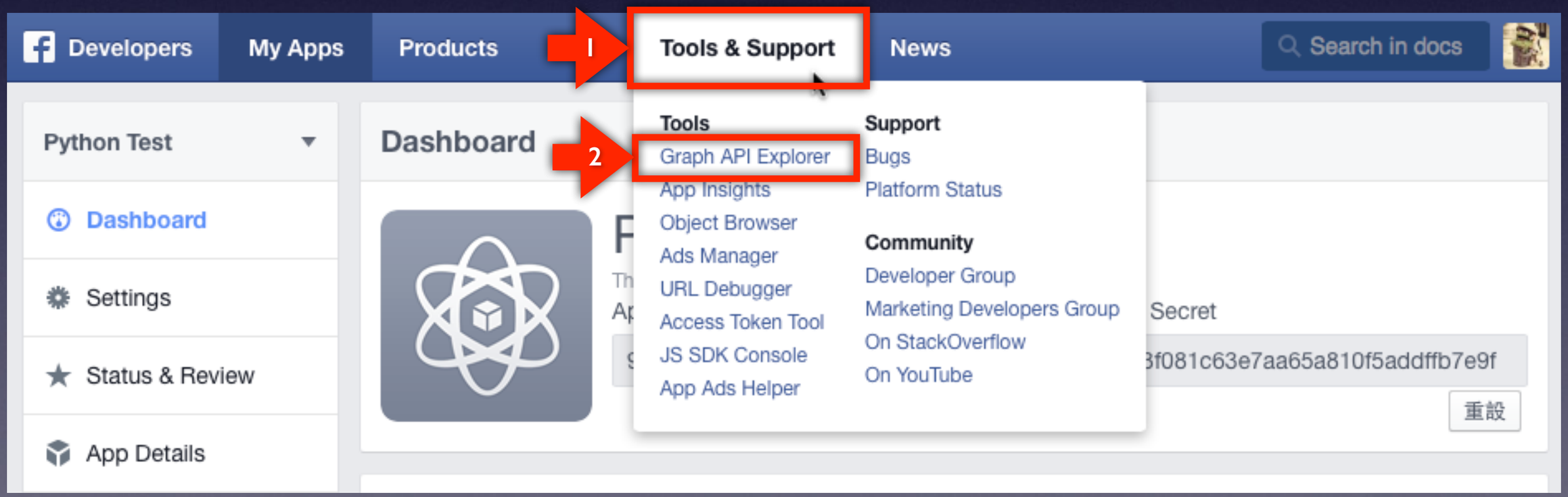
安全驗證
請選擇所有顯示雲朵的相片。
你也可以針對文字或語音執行安全驗證，而不只是相片。
若你認為這是誤會，請請通知我們。
送出
取消

- 完成建立 App

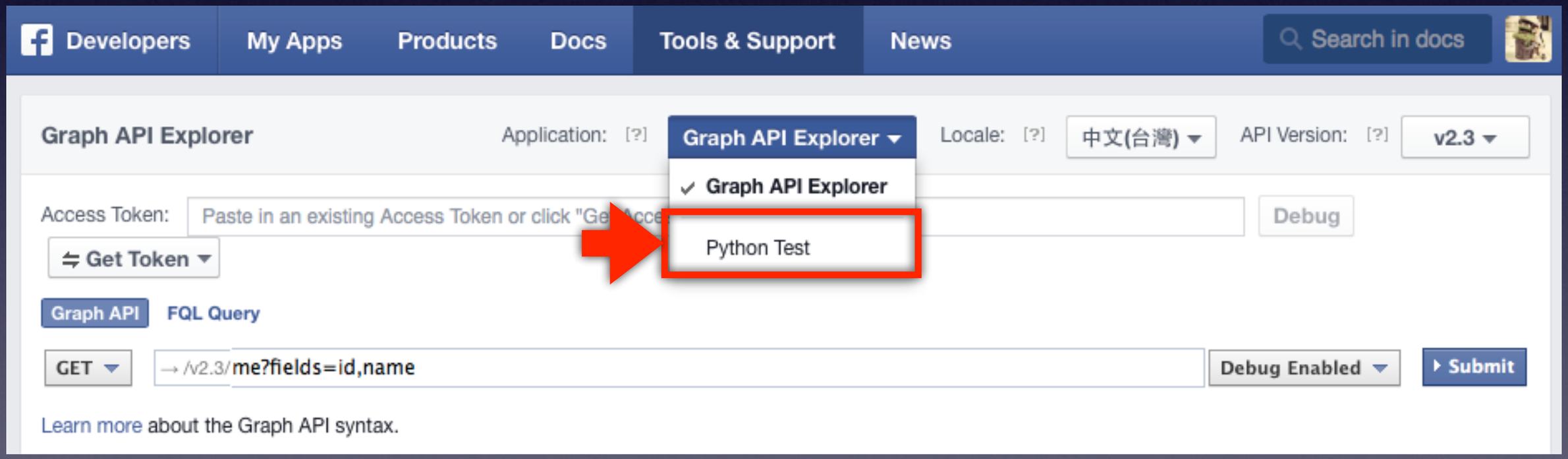

Developers
My Apps
Products
Docs
Tools & Support
News
Search in docs
Python Test
Dashboard
Settings
Status & Review
App Details
Roles
Open Graph
Alerts
Localize
Canvas Payments
Audience Network
Dashboard
Python Test
This app is in development mode [?]
App ID
994150533937955
API Version [?]
v2.3
App Secret
Show
Getting Started
The quickstart guides cover what you need to do in order to be able to start using the Facebook SDK for IOS, Android, Canvas and Websites.
Getting Started
Facebook Login
Active Login Users
Trend
Monthly Active Users
Weekly Active Users
Daily Active Users

取得 Graph API Token

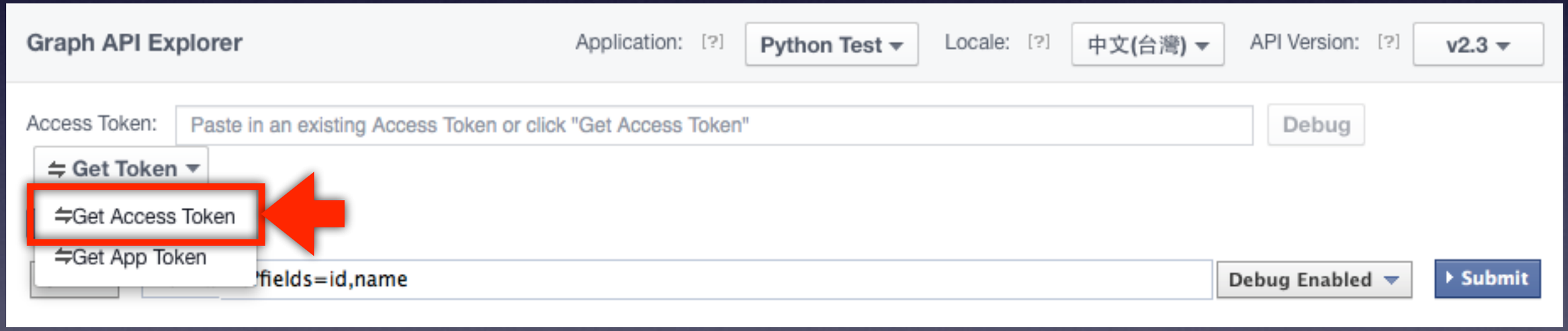
- 點選 “Tools & Support” 下的 “Graph API Explorer”



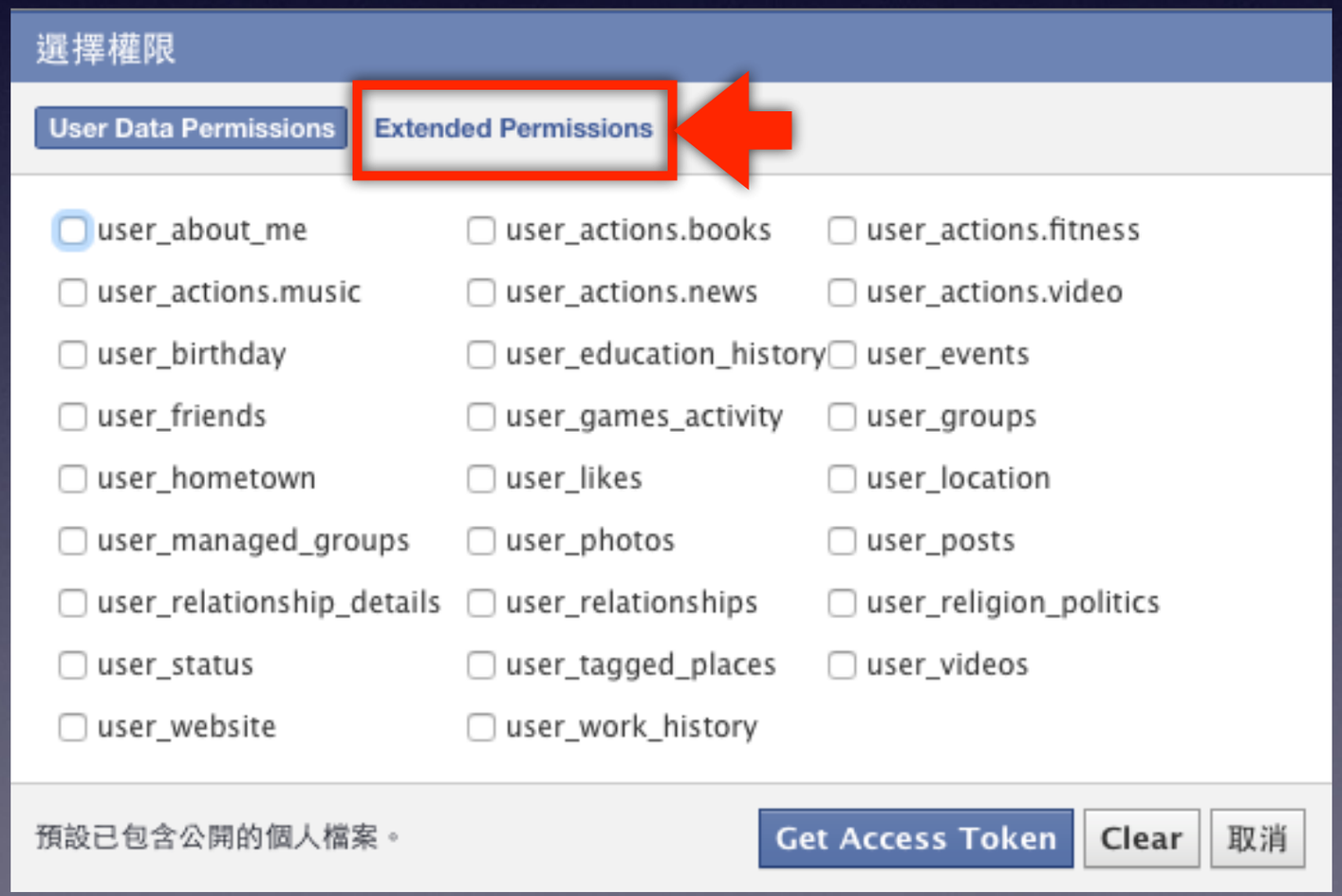
- Application 選擇 “Python Test”



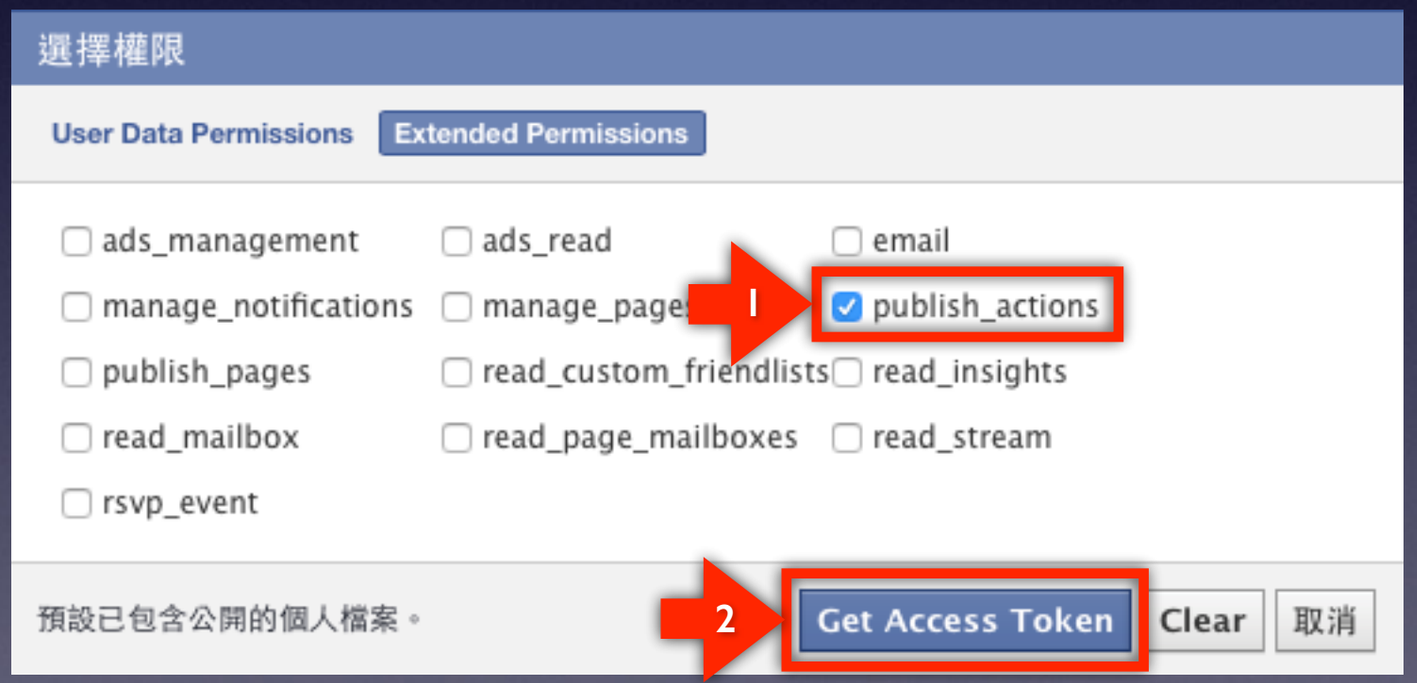
- Get Token 選擇 “Get Access Token”



- 選擇權限 點選 ”Extended Permissions” 分頁



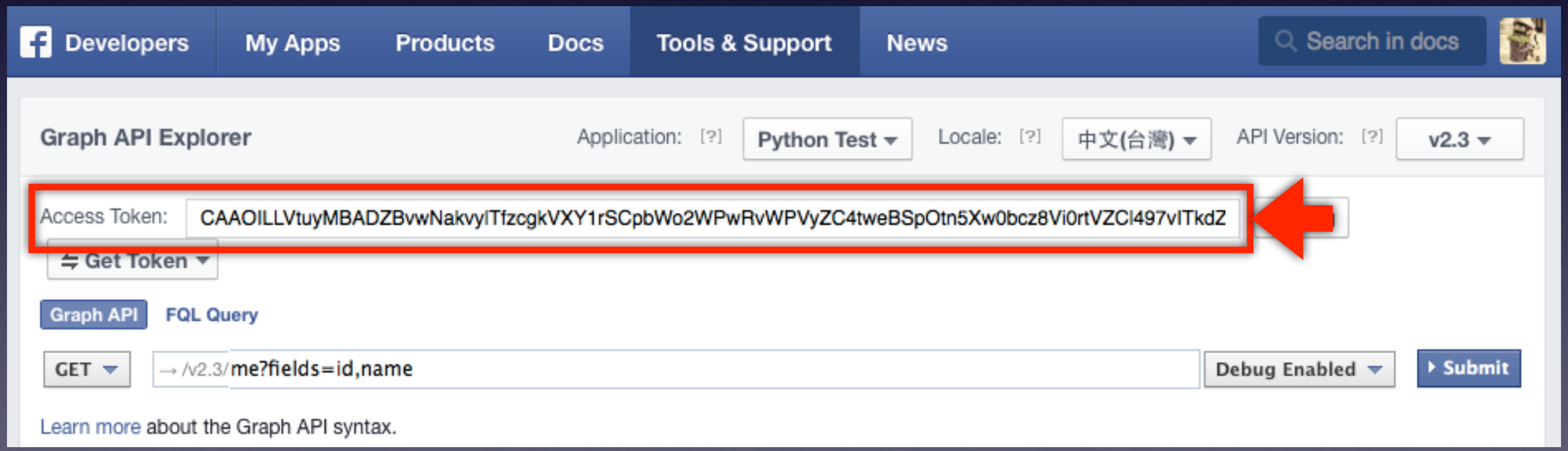
- Extended Permissions 勾選 “publish_actions” 後點選 “Get Access Token”



- Python Test 將取得以下資訊：你的公開的個人檔案 點選 “確定”

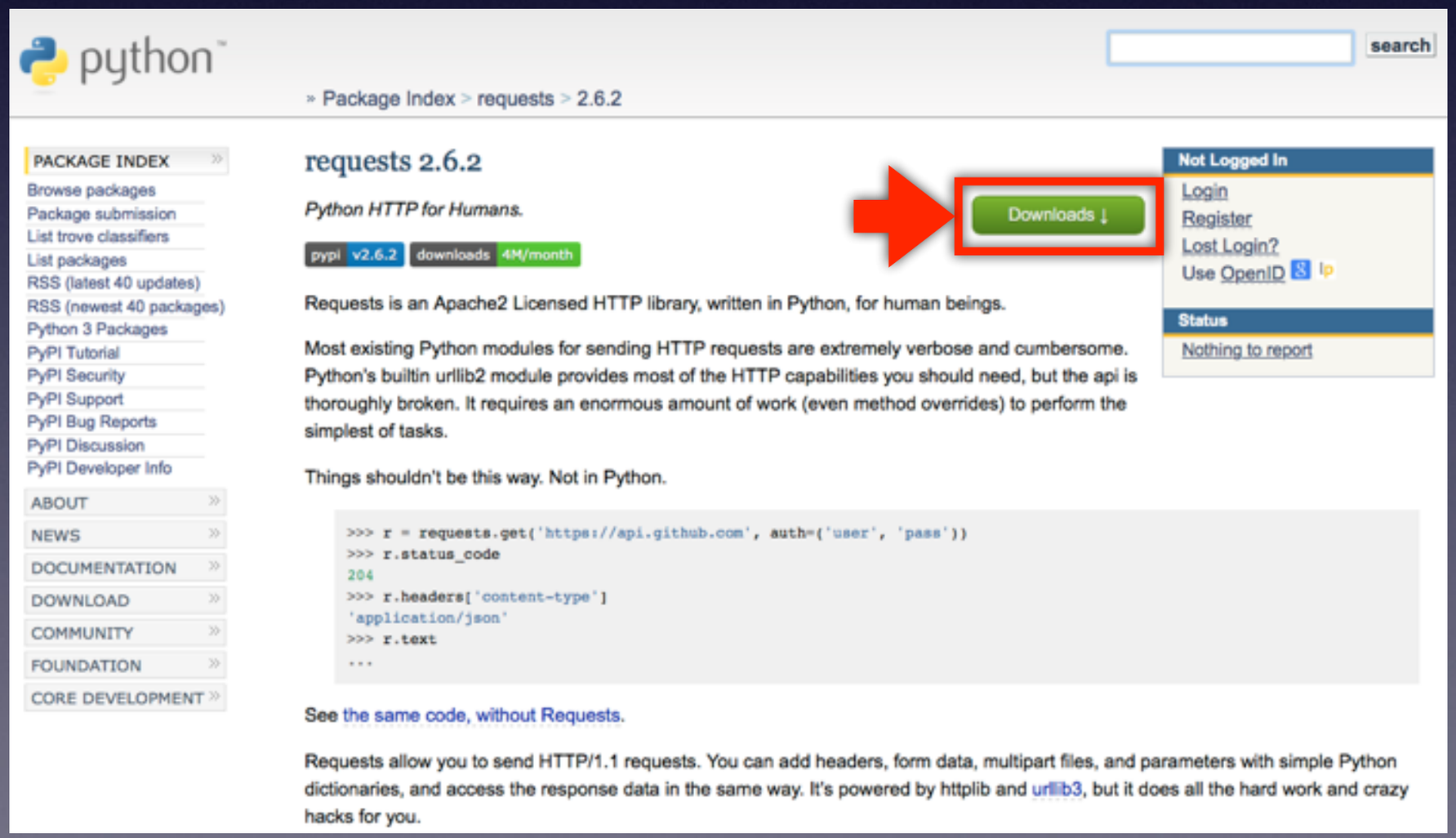
- Python Test 想替你在 Facebook 發表貼文點選 “確定”

- 完成 Access Token，並將 Access Token 複製



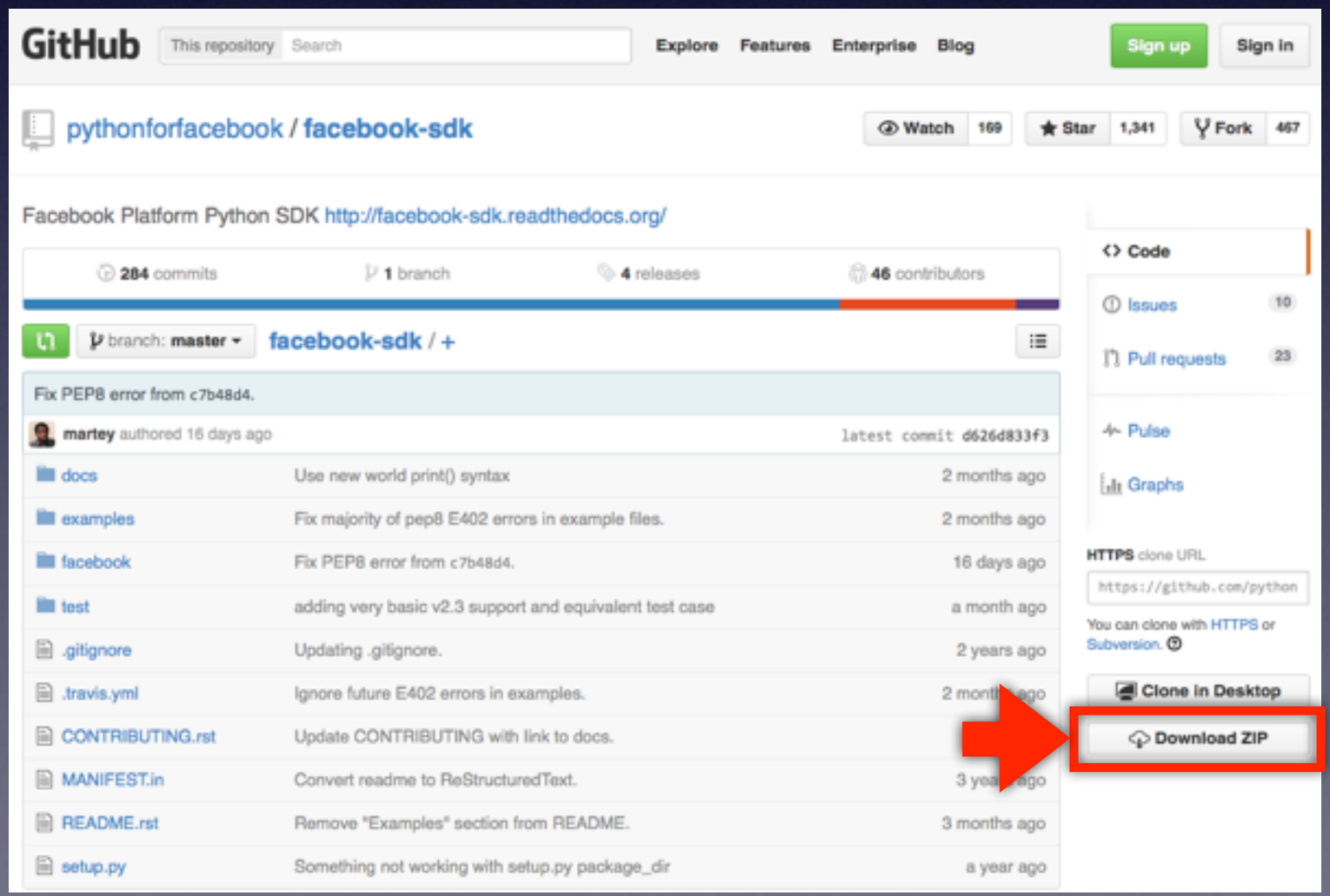
下載 requests package

- 至 https://pypi.python.org/pypi/requests 下載 requests



下載 Facebook SDK for Python

- 至 https://github.com/pythonforfacebook/facebook-sdk 下載 facebook-sdk



Facebook SDK for Python

- Installation
- Support & Development
  - Mailing List
  - Reporting Bugs
  - Contributing
- API Reference
  - class facebook.GraphAPI

This client library is designed to support the Facebook Graph API and the official Facebook JavaScript SDK, which is the canonical way to implement Facebook authentication. You can read more about the Graph API by accessing its official documentation.

Next

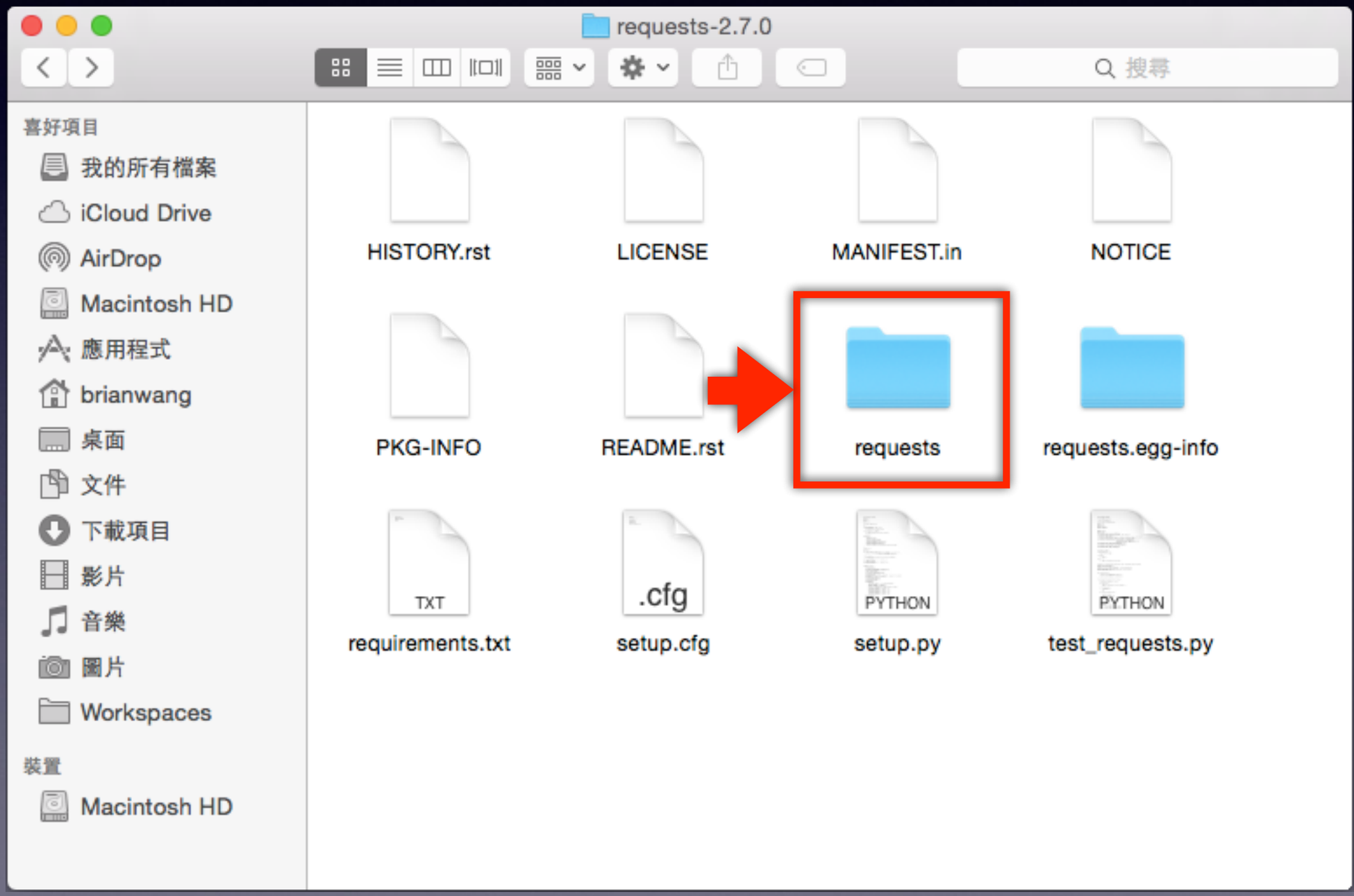
© Copyright 2010 Facebook, 2010-2014 Python for Facebook developers.

Built with Sphinx using a theme provided by Read the Docs.

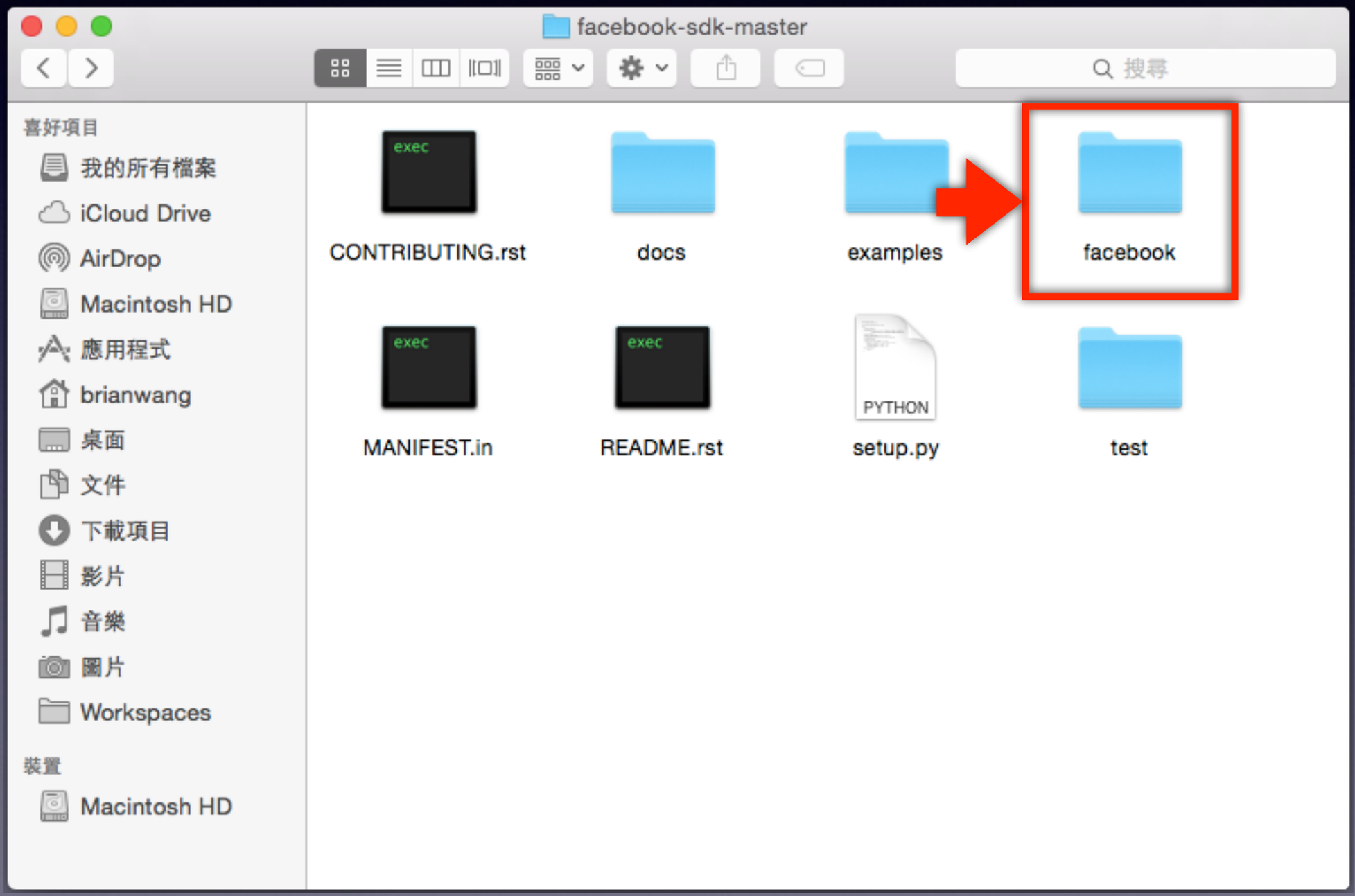
建立 Python 專案

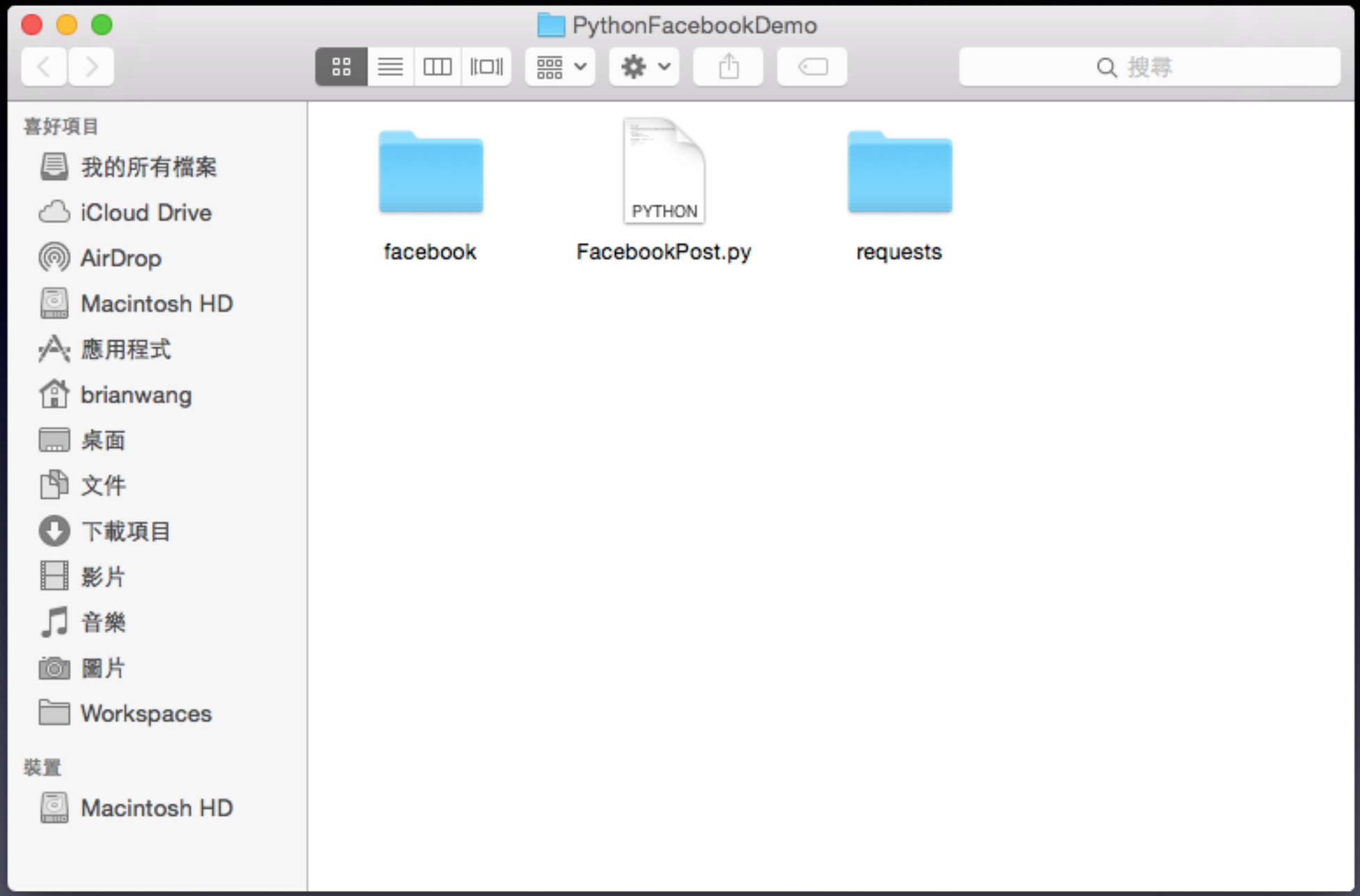
- 新增資料夾，名稱為 “PythonFacebookDemo”
- 建立 “FacebookPost.py” 的 Python 檔案
- 解壓縮 requests package 和 facebook-sdk

- 複製 requests-2.7.0 下的 requests 資料夾到 PythonFacebookDemo



- 複製 facebook-sdk-master 下的 Facebook 資料夾到 PythonFacebookDemo

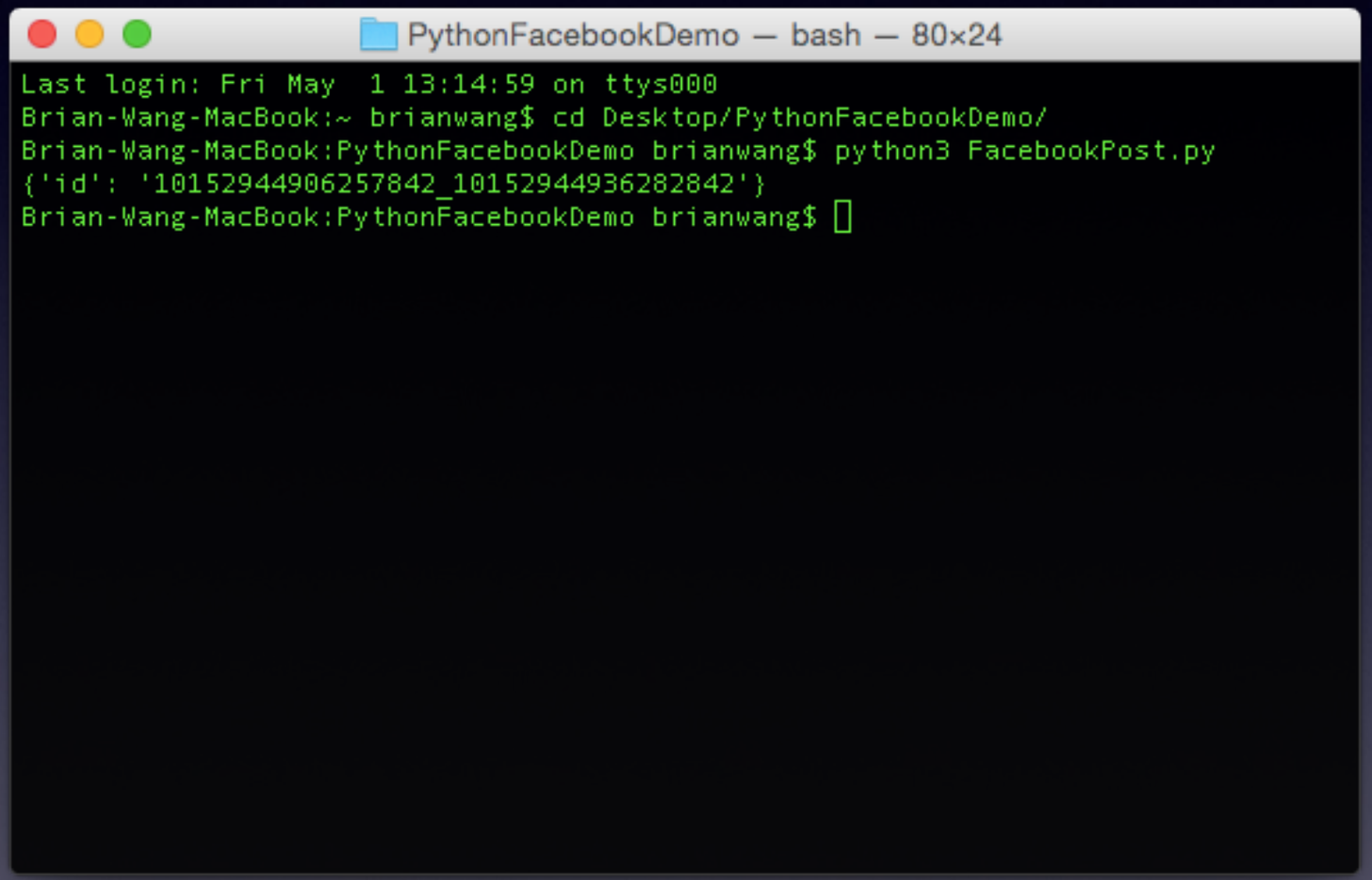



PythonFacebookDemo
搜尋
喜好項目
我的所有檔案
iCloud Drive
AirDrop
Macintosh HD
應用程式
brianwang
桌面
文件
下載項目
影片
音樂
圖片
Workspaces
裝置
Macintosh HD
facebook
PYTHON
FacebookPost.py
requests

撰寫 Python 程式碼

```python
import facebook

access_token = "CAAOILLVtuyMBAIee9LUaxpl5TIwgcpve1aBYri6ne4dFZCHPxrdeojojKjb11mKKiLp48pob8ZBqHfIaeAZBdXsaOkZB7ChIlHNAgVm4eWWsZCqUyoAWVTciCiaHM1

def main():
  api = get_api()
  msg = "Hello, world!"
  status = api.put_wall_post(msg)
  print(status)

def get_api():
  graph = facebook.GraphAPI(access_token)
  return graph

if __name__ == "__main__":
  main()
```

執行測試


PythonFacebookDemo — bash — 80×24
Last login: Fri May 1 13:14:59 on ttys000
Brian-Wang-MacBook:~ brianwang$ cd Desktop/PythonFacebookDemo/
Brian-Wang-MacBook:PythonFacebookDemo brianwang$ python3 FacebookPost.py
{'id': '10152944906257842_10152944936282842'}
Brian-Wang-MacBook:PythonFacebookDemo brianwang$

参考資料

- Python Facebook tutorial - post to Facebook page in 4 steps（http://nodotcom.org/python-facebook-tutorial.html）
- Facebook SDK for Python（http://facebook-sdk.readthedocs.org/en/latest/index.html）