

# 程式設計

Facebook SDK & Post by Python

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# What's 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 HttpURLConnection 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](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 1000559192. 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>)

facebook

電子郵件或電話  
  
☐ 記住我

密碼  
  
[忘記密碼?](#)

登入



要出門了？別忘了帶上手機  
隨時從手機瀏覽 facebook.com

開通 Facebook 手機功能

## 註冊

完全並永遠免費！

姓氏

名字

電子郵件地址或手機號碼

重新輸入電子郵件地址或手機號碼

新密碼

生日

年

月

日

[為什麼需要提供我的生日？](#)

☐ 女性 ☐ 男性

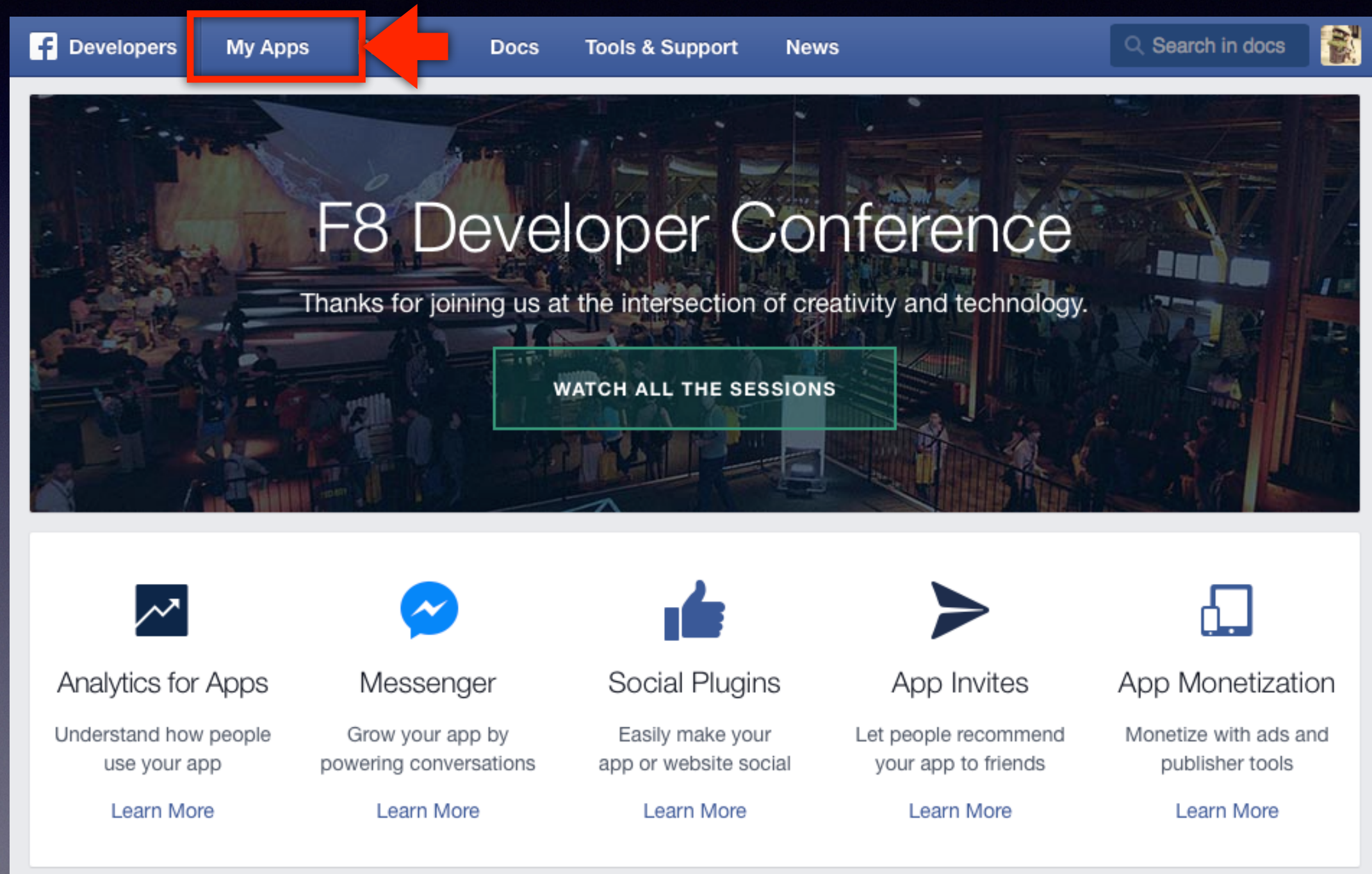
一旦點擊註冊，即表示你同意使用條款，而且你也閱讀了資料政策，包括 Cookie 的使用。

註冊

[為名人、團體或公司企業建立粉絲專頁](#)




- 進入 Facebook Developer 頁面 (<https://developers.facebook.com>) 後點選“My





- 點選 “Create a New App”

 Developers


My Apps


Products

Docs


Tools & Support

News


 Search in docs



You currently have no apps integrated with Facebook.



Create a New App

 Developers

**Products**  
Facebook Login  
Sharing  
Parse  
Games  
Ads for Apps

**SDKs**  
iOS SDK  
Android SDK  
JavaScript SDK  
PHP SDK  
Unity SDK

**Tools**  
Graph API Explorer  
Open Graph Debugger  
Object Browser  
JavaScript Test Console  
Facebook Insights

**Support**  
Platform Status  
Developers Group  
Preferred Developers  
Bugs

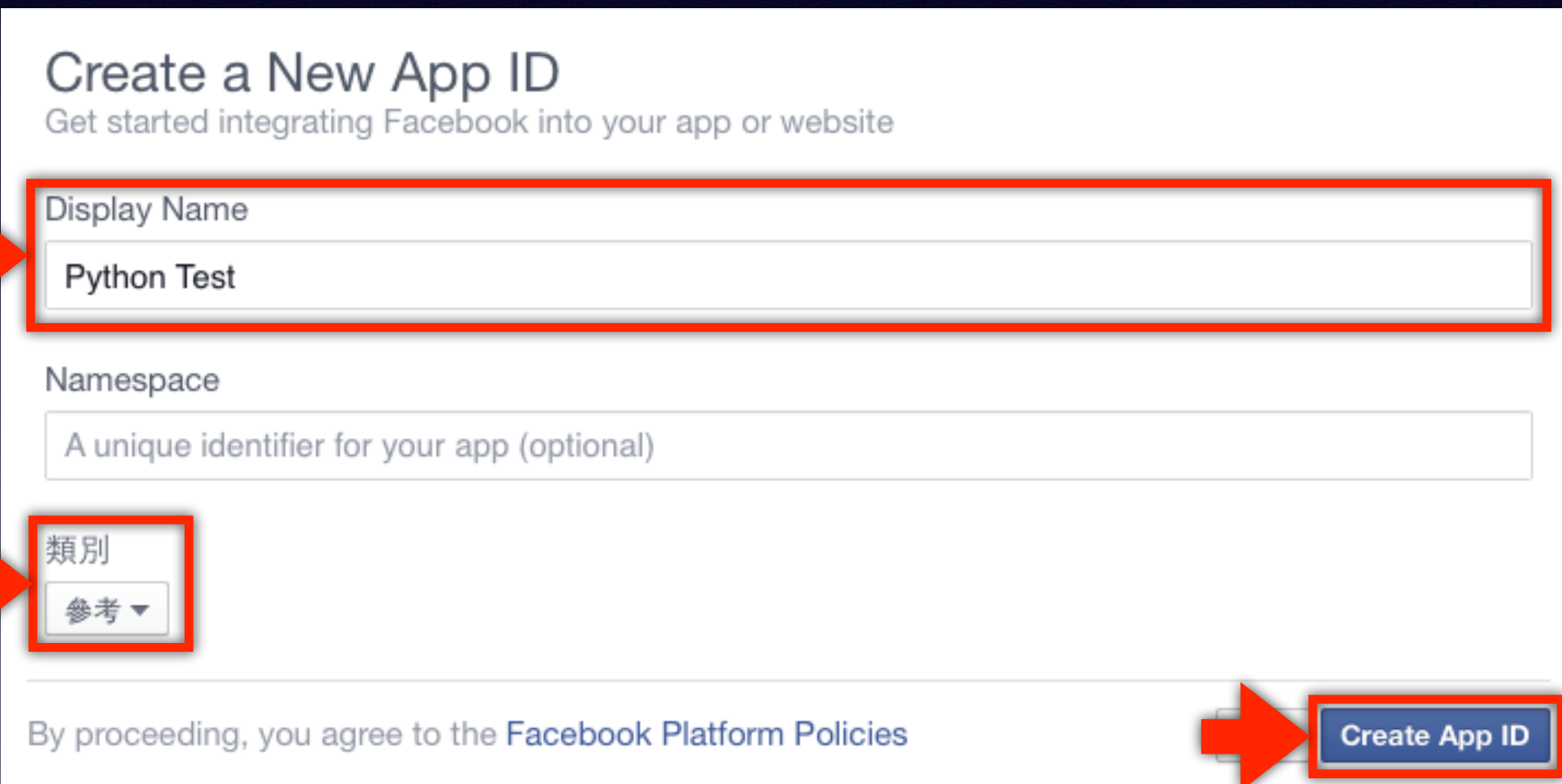
**News**  
Blog  
Developer Roadmap  
Showcase

Facebook © 2015  
中文(台灣)

[About](#) [Create Ad](#) [Careers](#) [Platform Policy](#) [Privacy Policy](#) [Cookies](#) [Terms](#)



- Display Name 輸入 Python Test



The screenshot shows the 'Create a New App ID' form on the Facebook developer portal. The form includes a title, a subtitle, and three main input fields. Red arrows and boxes highlight specific elements: the 'Display Name' field containing 'Python Test', the 'Namespace' field with placeholder text, the '類別' (Category) dropdown menu showing '參考' (Reference), and the 'Create App ID' button at the bottom right.

Create a New App ID

Get started integrating Facebook into your app or website

Display Name

Python Test

Namespace

A unique identifier for your app (optional)

類別

參考 ▼

By proceeding, you agree to the Facebook Platform Policies

Create App ID

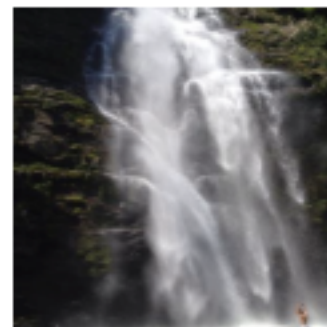
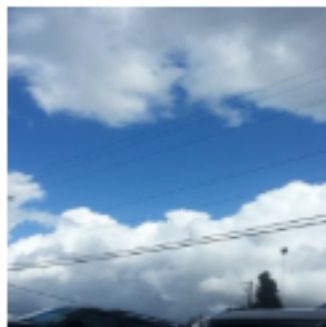
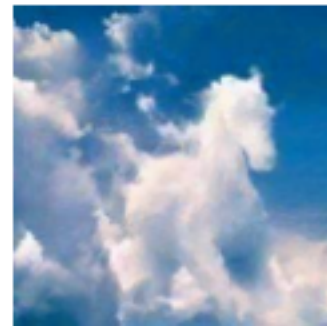
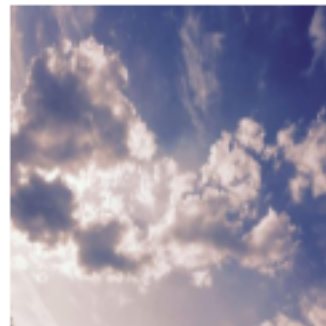


- 安全驗證 後點選“送出”

#### 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。





- 完成建立 App

fb 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

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

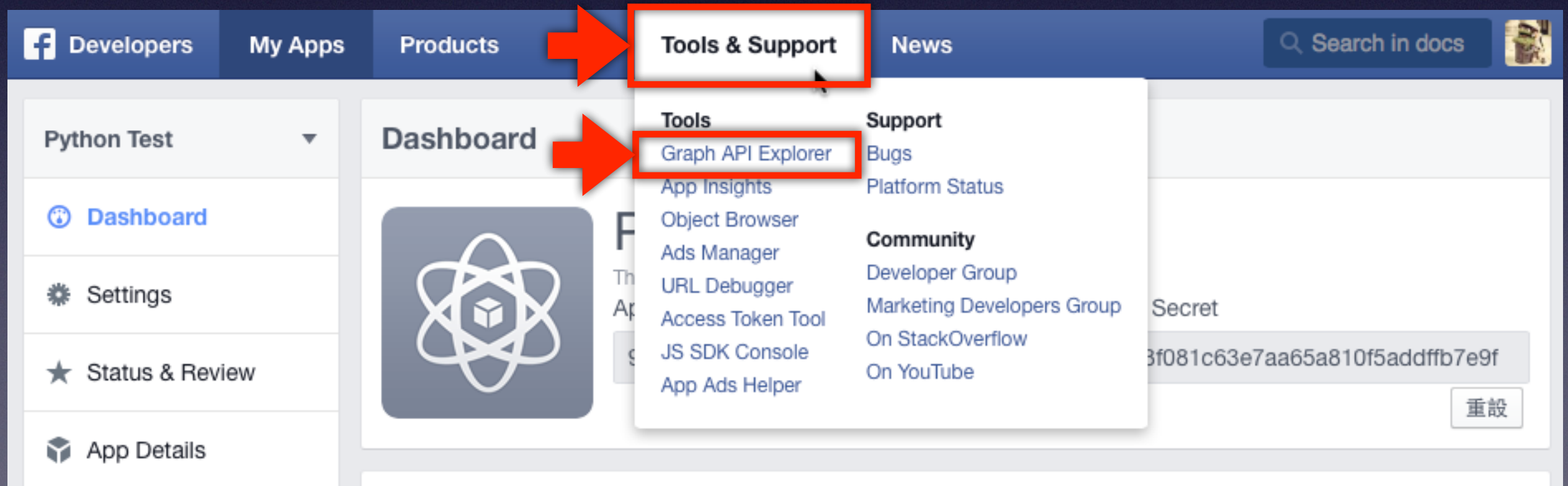
Weekly Active Users

Daily Active Users



# 取得 Graph API Token

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





- Application 選擇 “Python Test”

The screenshot shows the Facebook Graph API Explorer interface. At the top, there is a navigation bar with links: Developers, My Apps, Products, Docs, Tools & Support, and News. A search bar labeled 'Search in docs' is on the right. Below the navigation bar, the main area is titled 'Graph API Explorer'. It includes a header with 'Application: [?]', a dropdown menu currently showing 'Graph API Explorer', 'Locale: [?]', a language selector set to '中文(台灣)', and 'API Version: [?] v2.3'. Below this, there is an 'Access Token' field with a placeholder text 'Paste in an existing Access Token or click "Get Access Token"', a 'Get Token' button, and a 'Debug' button. A red arrow points from the 'Get Token' button area to the 'Python Test' option in the application dropdown menu. The dropdown menu also shows '✓ Graph API Explorer'. Below the application selection, there are tabs for 'Graph API' and 'FQL Query'. The 'Graph API' tab is active, showing a 'GET' method selector, a URL field containing '/v2.3/me?fields=id,name', a 'Debug Enabled' dropdown, and a 'Submit' button. At the bottom, there is a link: 'Learn more about the Graph API syntax.'



- Get Token 選擇 “Get Access Token”

Graph API Explorer

Application: [?] Python Test ▼

Locale: [?] 中文(台灣) ▼

API Version: [?] v2.3 ▼

Access Token:  Debug

Get Token ▼

Get Access Token

Get App Token

fields=id,name

Debug Enabled ▼

Submit



- 選擇權限 點選 ”Extended Permissions” 分頁

選擇權限

☒ User Data Permissions ☐ **Extended Permissions** 

<input checked="" type="checkbox"/> user_about_me	<input type="checkbox"/> user_actions.books	<input type="checkbox"/> user_actions.fitness
<input type="checkbox"/> user_actions.music	<input type="checkbox"/> user_actions.news	<input type="checkbox"/> user_actions.video
<input type="checkbox"/> user_birthday	<input type="checkbox"/> user_education_history	<input type="checkbox"/> user_events
<input type="checkbox"/> user_friends	<input type="checkbox"/> user_games_activity	<input type="checkbox"/> user_groups
<input type="checkbox"/> user_hometown	<input type="checkbox"/> user_likes	<input type="checkbox"/> user_location
<input type="checkbox"/> user_managed_groups	<input type="checkbox"/> user_photos	<input type="checkbox"/> user_posts
<input type="checkbox"/> user_relationship_details	<input type="checkbox"/> user_relationships	<input type="checkbox"/> user_religion_politics
<input type="checkbox"/> user_status	<input type="checkbox"/> user_tagged_places	<input type="checkbox"/> user_videos
<input type="checkbox"/> user_website	<input type="checkbox"/> user_work_history	

預設已包含公開的個人資料。



- Extended Permissions 勾選“publish\_actions”後點選“Get Access Token”

選擇權限

User Data Permissions Extended Permissions

<input type="checkbox"/> ads_management	<input type="checkbox"/> ads_read	<input type="checkbox"/> email
<input type="checkbox"/> manage_notifications	<input type="checkbox"/> manage_pages	<input checked="" type="checkbox"/> publish_actions
<input type="checkbox"/> publish_pages	<input type="checkbox"/> read_custom_friendlists	<input type="checkbox"/> read_insights
<input type="checkbox"/> read_mailbox	<input type="checkbox"/> read_page_mailboxes	<input type="checkbox"/> read_stream
<input type="checkbox"/> rsvp_event		

預設已包含公開的個人資料。

Get Access Token Clear 取消



- 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

Facebook Developers navigation bar: Developers, My Apps, Products, Docs, Tools & Support, News. Search in docs.

Graph API Explorer

Application: [?] Python Test ▼ Locale: [?] 中文(台灣) ▼ API Version: [?] v2.3 ▼

Access Token: CAAOILLVtuyMBADZBvwNakvyITfzcgkVXY1rSCpbWo2WPwRvWPVyZC4tweBSpOtn5Xw0bcz8Vi0rtVZCI497vITkdZ

Get Token ▼

Graph API FQL Query

GET ▼ → /v2.3/me?fields=id,name Debug Enabled ▼ Submit

[Learn more about the Graph API syntax.](#)



# 下載 requests package

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

The screenshot shows the PyPI page for the `requests` package, version 2.6.2. The page layout includes a sidebar on the left with navigation links, a main content area with package details, and a right sidebar with user login options. A red arrow points to the 'Downloads ↓' button in the main content area.

**PACKAGE INDEX** >>

- Browse packages
- Package submission
- List trove classifiers
- List packages
- RSS (latest 40 updates)
- RSS (newest 40 packages)
- Python 3 Packages
- PyPI Tutorial
- PyPI Security
- PyPI Support
- PyPI Bug Reports
- PyPI Discussion
- PyPI Developer Info

**ABOUT** >>

**NEWS** >>

**DOCUMENTATION** >>

**DOWNLOAD** >>

**COMMUNITY** >>

**FOUNDATION** >>

**CORE DEVELOPMENT** >>

**requests 2.6.2**

*Python HTTP for Humans.*

pypi v2.6.2 downloads 4M/month

Downloads ↓

Requests is an Apache2 Licensed HTTP library, written in Python, for human beings.

Most existing Python modules for sending HTTP requests are extremely verbose and cumbersome. Python's builtin urllib2 module provides most of the HTTP capabilities you should need, but the api is thoroughly broken. It requires an enormous amount of work (even method overrides) to perform the simplest of tasks.

Things shouldn't be this way. Not in Python.

```
>>> r = requests.get('https://api.github.com', auth=('user', 'pass'))
>>> r.status_code
204
>>> r.headers['content-type']
'application/json'
>>> r.text
...

```

See [the same code, without Requests](#).

Requests allow you to send HTTP/1.1 requests. You can add headers, form data, multipart files, and parameters with simple Python dictionaries, and access the response data in the same way. It's powered by httplib and urllib3, but it does all the hard work and crazy hacks for you.

**Not Logged In**

- Login
- Register
- Lost Login?
- Use OpenID

**Status**

[Nothing to report](#)



# 下載 Facebook SDK for Python

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

The screenshot displays the GitHub interface for the `pythonforfacebook / facebook-sdk` repository. At the top, there's a navigation bar with the GitHub logo, a search bar, and links to Explore, Features, Enterprise, and Blog. On the right, there are buttons for Sign up and Sign in. Below the navigation bar, the repository name is shown along with statistics: 169 Watchers, 1,341 Stars, and 467 Forks. A description of the repository is provided: "Facebook Platform Python SDK" with a link to the documentation. Below this, repository statistics are listed: 284 commits, 1 branch, 4 releases, and 46 contributors. A section for the latest commit shows it was authored 16 days ago by 'marley' and includes a list of files and folders with their commit dates. On the right sidebar, there are links for Code, Issues, Pull requests, Pulse, and Graphs. At the bottom of the sidebar, there are buttons for 'Clone in Desktop' and 'Download ZIP', with a red arrow pointing to the latter.

File/Folder	Description	Commit Date
docs	Use new world print() syntax	2 months ago
examples	Fix majority of pep8 E402 errors in example files.	2 months ago
facebook	Fix PEP8 error from c7b48d4.	16 days ago
test	adding very basic v2.3 support and equivalent test case	a month ago
.gitignore	Updating .gitignore.	2 years ago
.travis.yml	Ignore future E402 errors in examples.	2 months ago
CONTRIBUTING.rst	Update CONTRIBUTING with link to docs.	2 months ago
MANIFEST.in	Convert readme to ReStructuredText.	3 years ago
README.rst	Remove "Examples" section from README.	3 months ago
setup.py	Something not working with setup.py package_dir	a year ago



# 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](#).

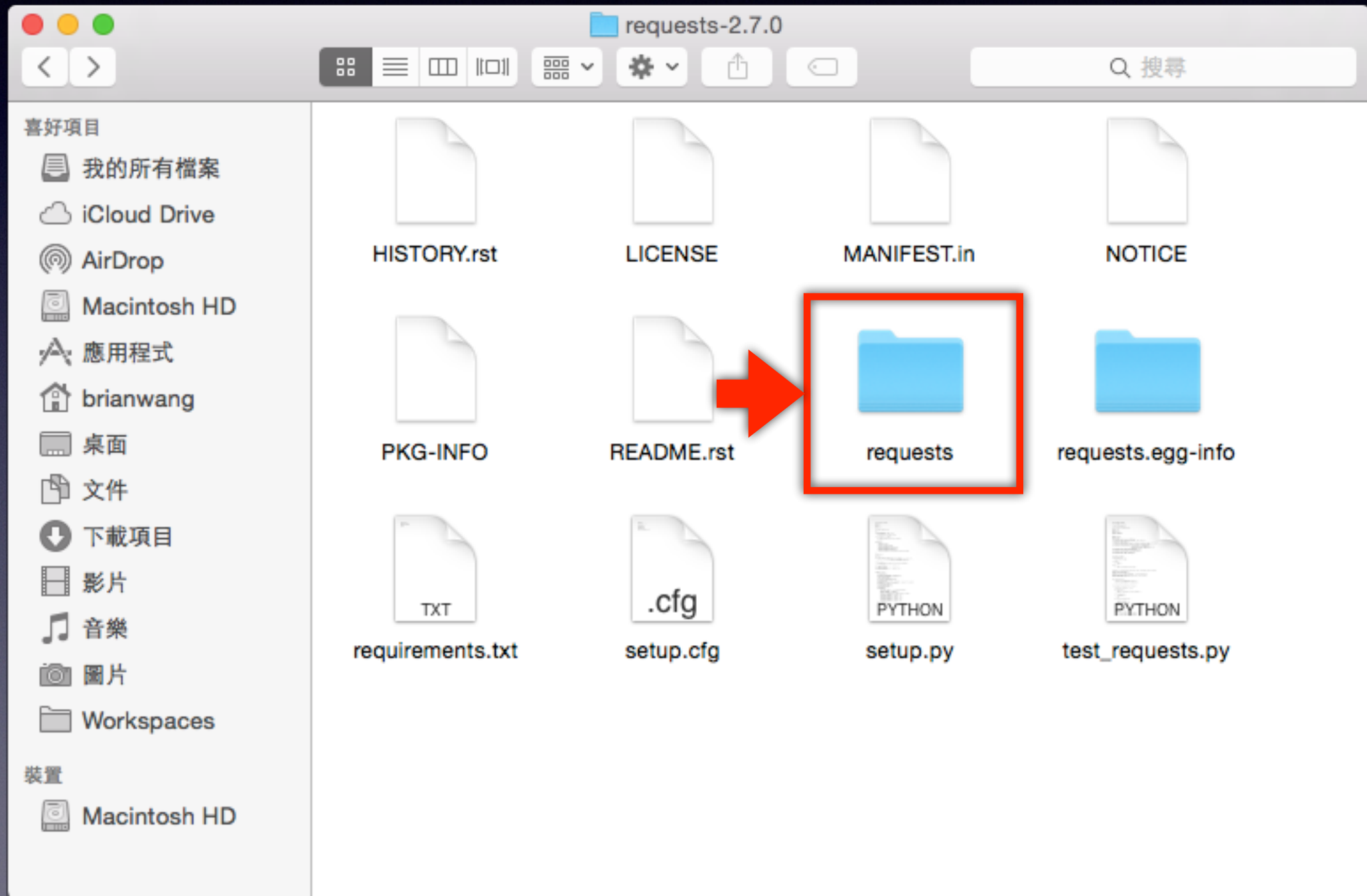


# 建立 Python 專案

- 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

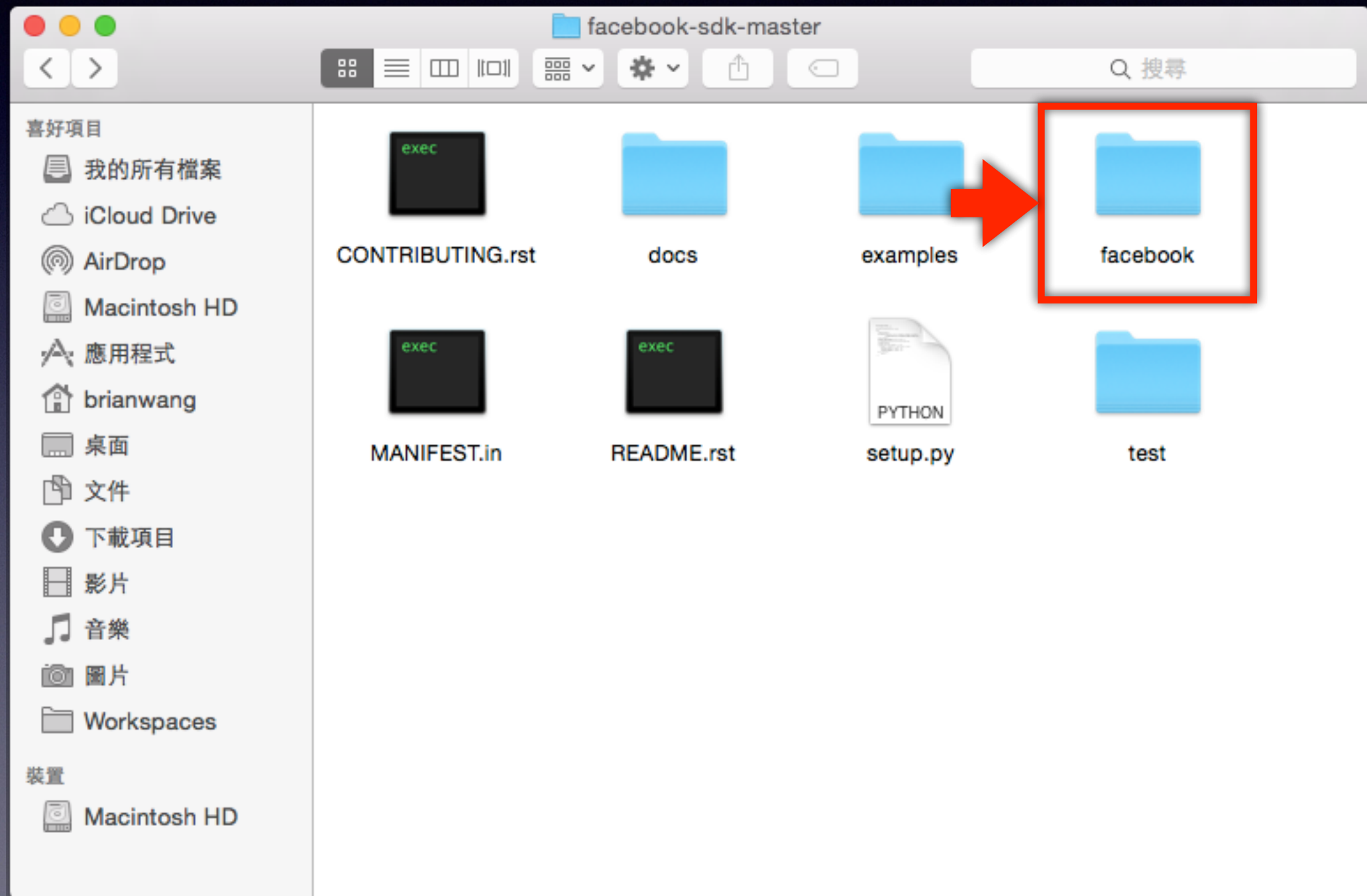


- 複製 requests-2.7.0 下的 requests 資料夾到 PythonFacebookDemo

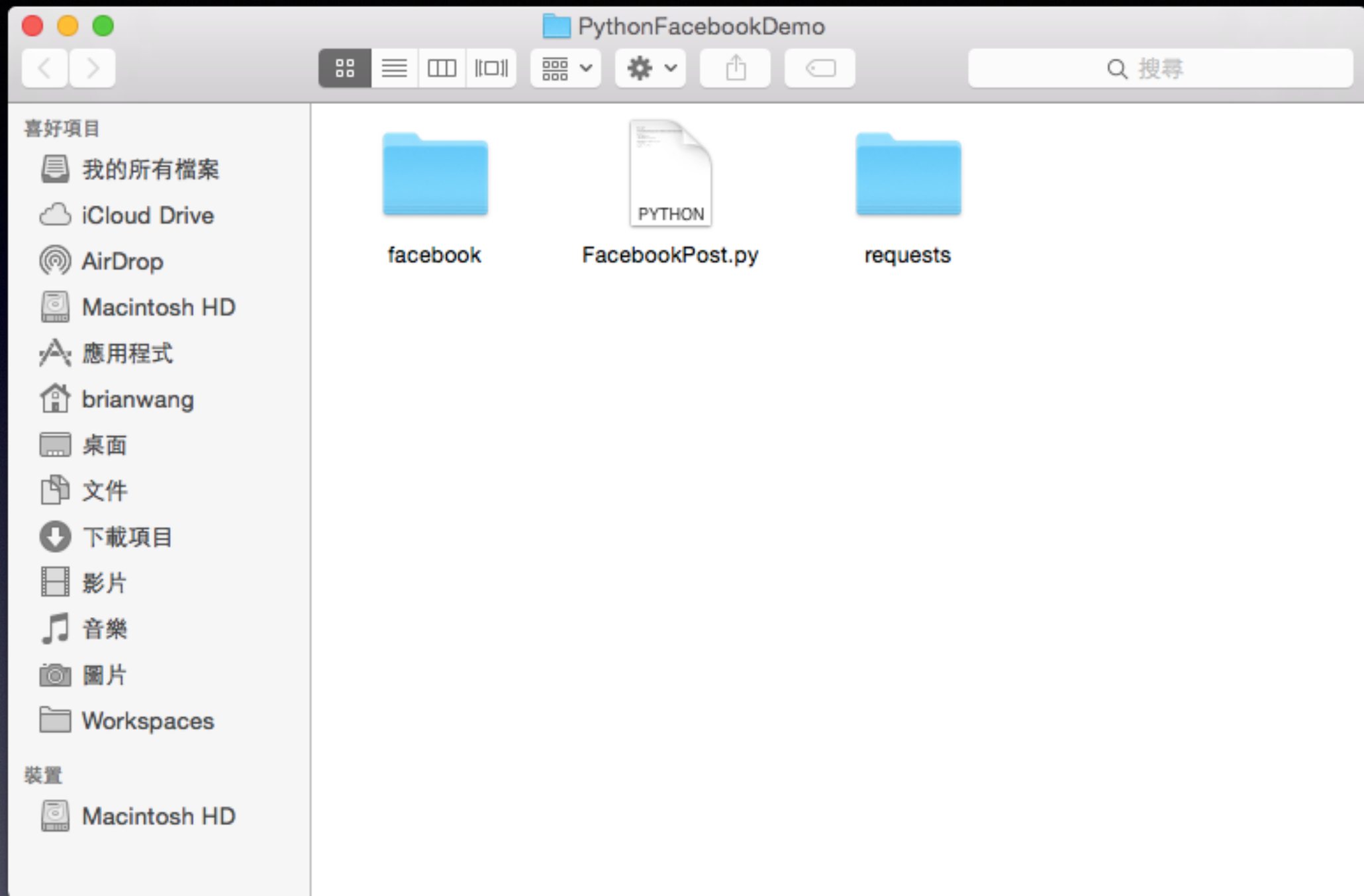




- 複製 facebook-sdk-master 下的 Facebook 資料夾到 PythonFacebookDemo







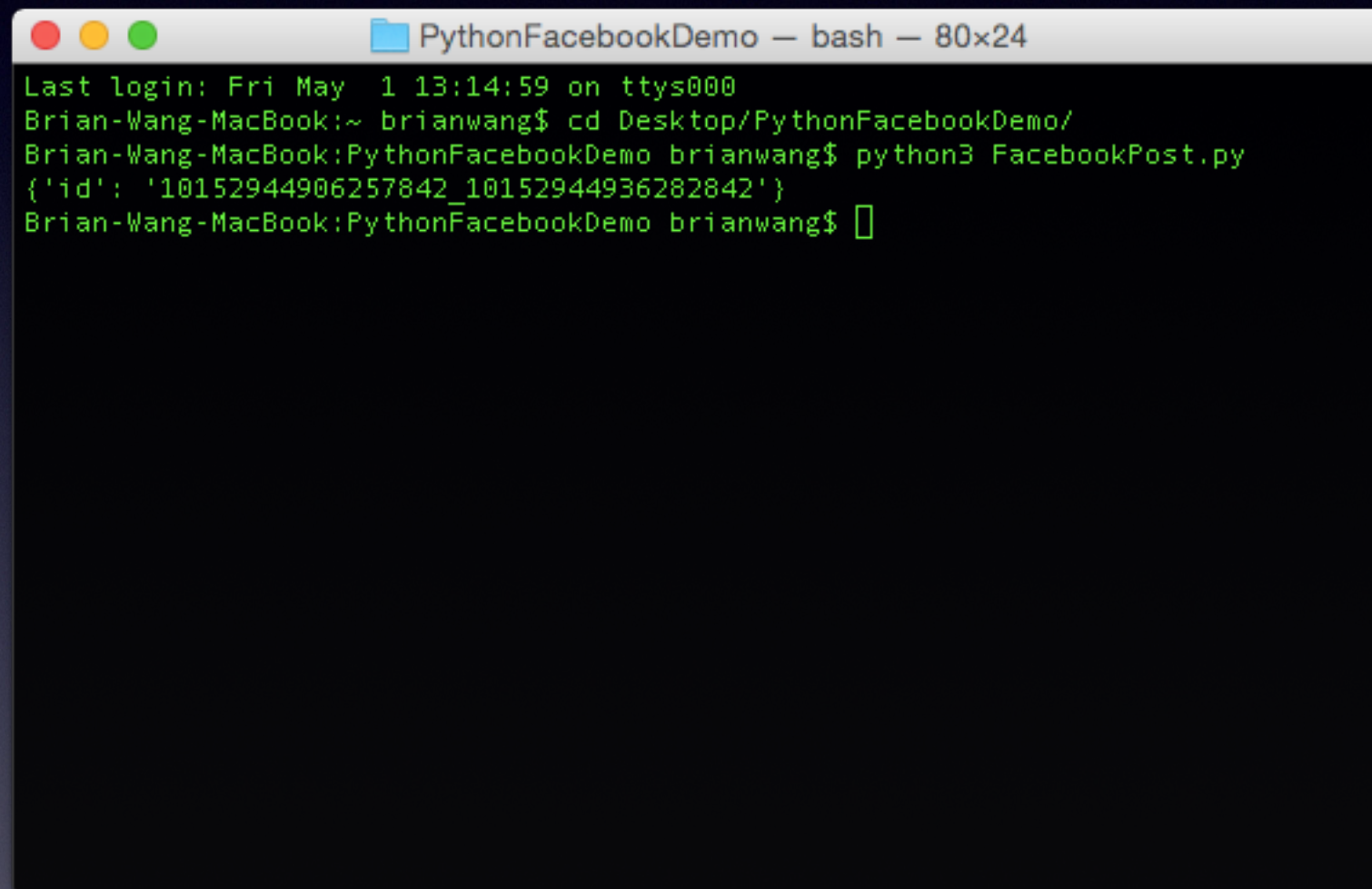


# 撰寫 Python 程式碼

```
1 import facebook
2
3 access_token = "CAA0ILLVtuyMBAIee9LUaxpl5TIwgcpve1aBYri6ne4dFZCHPxrdeojKjb11mKKiLp48pob8ZBqHfIaeAZBdXsa0kZB7ChI1HNAgVm4eWwsZCqUyoAWVTciCiaHM1"
4
5 ▼ def main():
6     api = get_api()
7     msg = "Hello, world!"
8     status = api.put_wall_post(msg)
9     print(status)
10
11 ▼ def get_api():
12     graph = facebook.GraphAPI(access_token)
13     return graph
14
15 ▼ if __name__ == "__main__":
16     main()
```



# 執行測試



```
PythonFacebookDemo — bash — 80x24
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$
```



# 參考資料

- 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>)