

Python

介紹Python / IDE / Hello, World! / OJ

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上課時間（9月）

記得要來喔～

日	一	二	三	四	五	六
30 十二	31 十三	1 十四	2 十五	3 十六	4 十七	5 十八
6 十九	7 白露	8 廿一	9 廿二	10 廿三	11 廿四	12 廿五
13 廿六	14 廿七	15 廿八	16 廿九	17 八月	18 初二	19 初三
20 初四	21 初五	22 秋分	23 初七	24 初八	25 初九	26 初十
27	28	29	30	1	2	3

基本上是每個禮拜四

下禮拜（9/17）、下下禮拜（9/24）都有上課喔

時間是17:00~18:00

有臨時改動會在群組通知

段考前一周不上課



Line群組連結

Python 簡介



課程大綱

輕鬆的第一堂課～



IDE

ex: repl.it, sublime,...



Hello, World!

寫程式的第一步



print()

輸出



Online judge

ex: zerojudge, ckeisc oj,...



Q&A

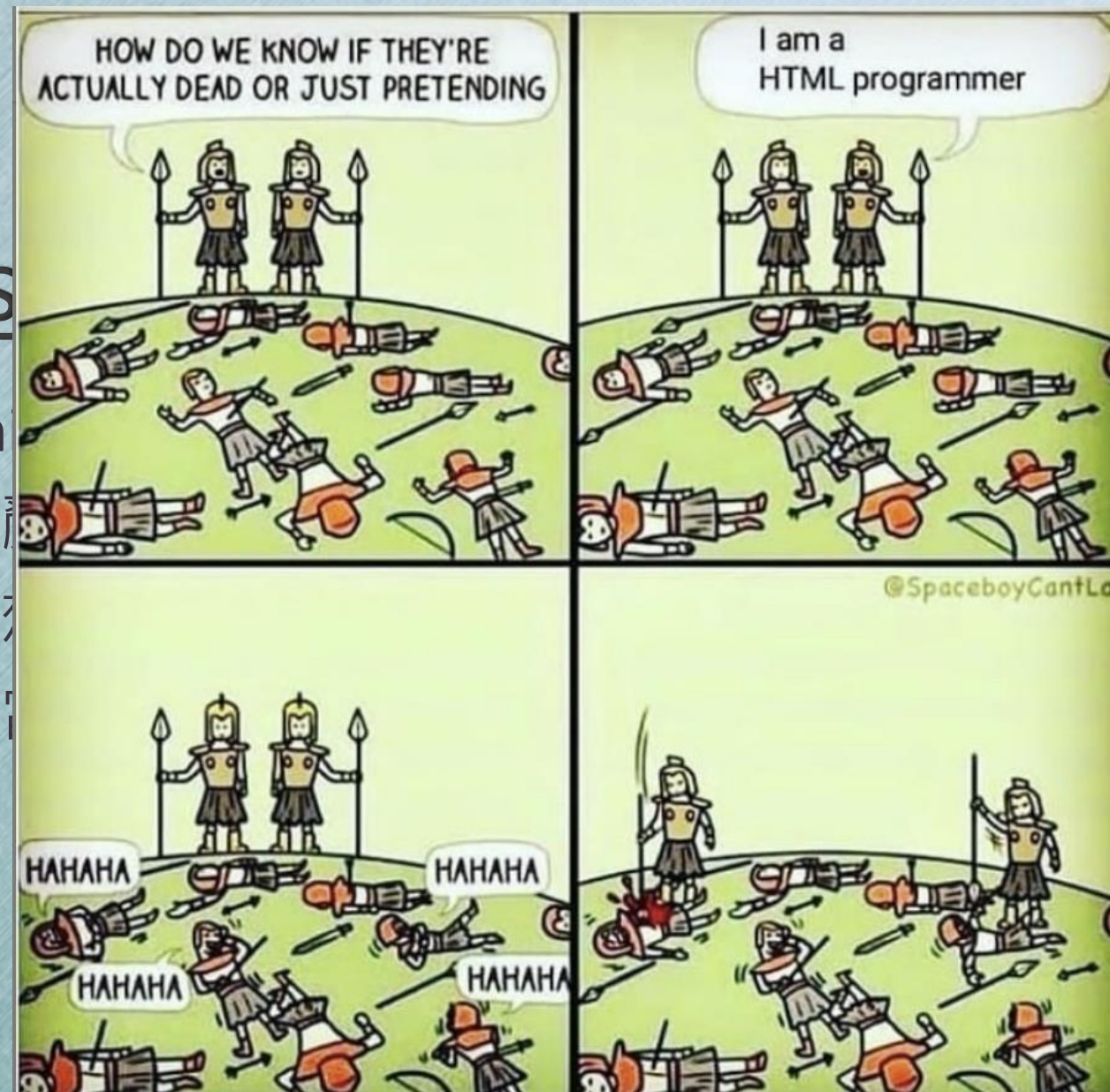
問答時間

Sublime Text

好看又好用的選擇

<https://www.sublimetext.com/>

- "Go to anything"
- 有多種文字顏色
- 支援所有你需要的功能
- 也可以純粹當一個文本編輯器



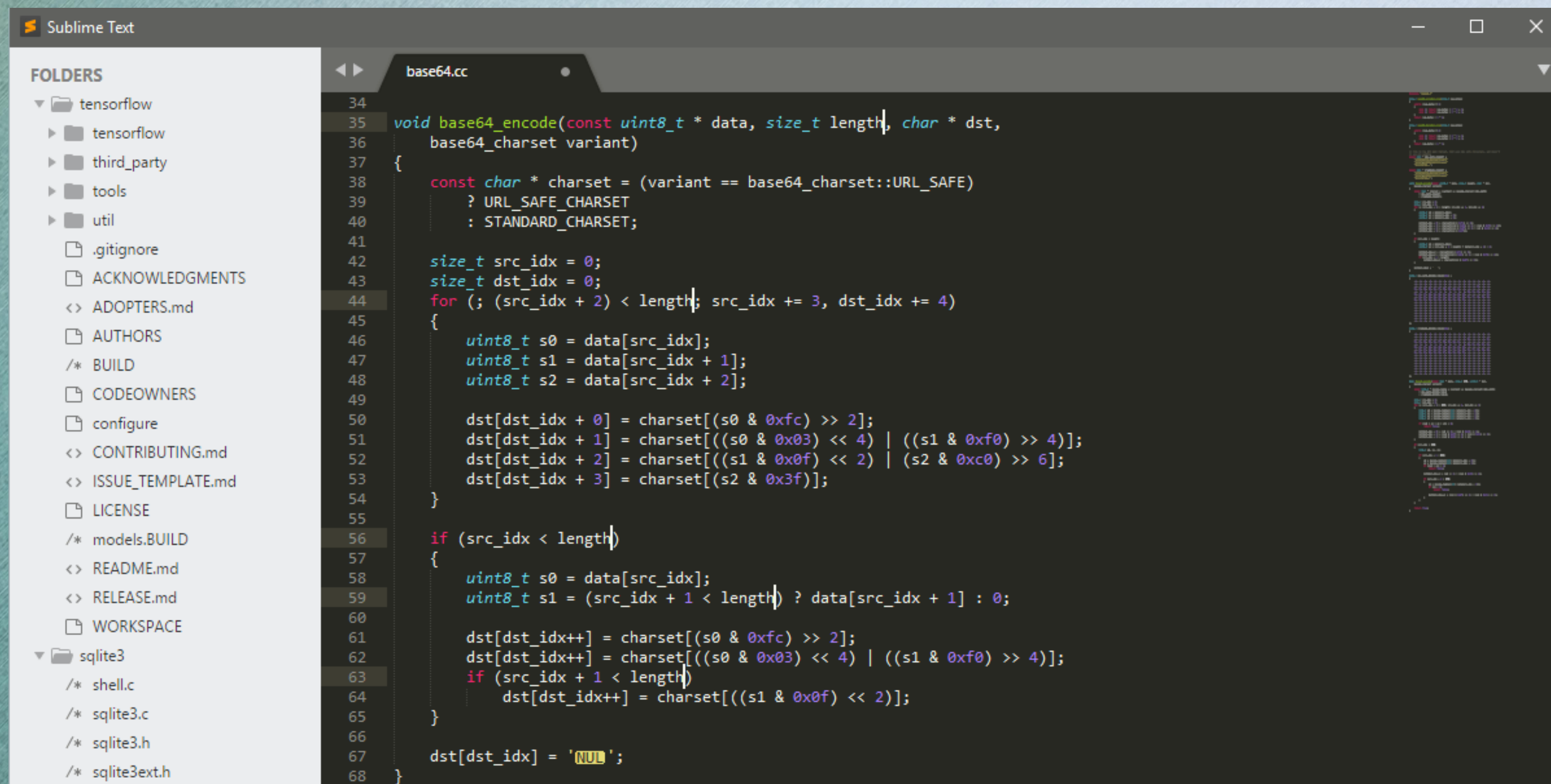
[com/](https://www.sublimetext.com/)

黑字
，例如HTML

Credit: ig @code_student

Sublime Text

好看又好用的選擇



Anaconda + Jupyter Notebook

需要下載但可使用進階功能

<https://www.anaconda.com/products/individual>

- 超過1200萬人使用的python開發環境
- 介面類似windows內建cmd (小黑窗)
- 可用pip install安裝開源軟體包 (擴充功能)

Anaconda + Jupyter Notebook

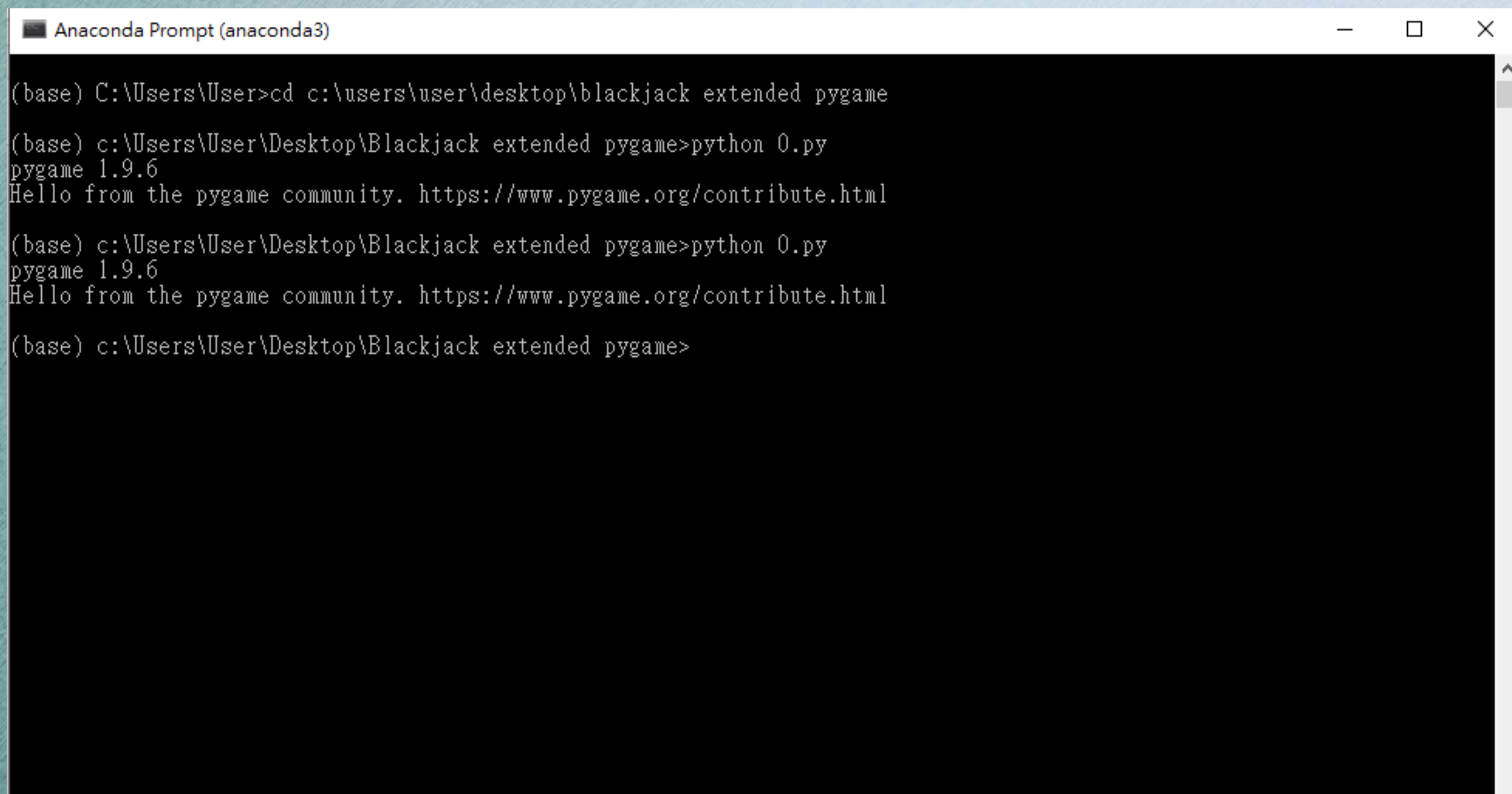
需要下載但可使用進階功能

<https://jupyter.org/install>

- 在anaconda中使用pip install jupyterlab指令安裝
- 在瀏覽器中編輯，存檔在電腦後在anaconda中編譯
- 下學期教到爬蟲或pygame等較進階功能時使用

Anaconda + Jupyter Notebook


需要下載但可使用進階功能



```
Anaconda Prompt (anaconda3)
(base) C:\Users\User>cd c:\users\user\desktop\blackjack extended pygame
(base) c:\Users\User\Desktop\Blackjack extended pygame>python 0.py
pygame 1.9.6
Hello from the pygame community. https://www.pygame.org/contribute.html
(base) c:\Users\User\Desktop\Blackjack extended pygame>python 0.py
pygame 1.9.6
Hello from the pygame community. https://www.pygame.org/contribute.html
(base) c:\Users\User\Desktop\Blackjack extended pygame>
```


Anaconda + Jupyter Notebook

需要下載但可使用進階功能

 jupyter

QuitLogout


FilesRunningClusters

Select items to perform actions on them.

UploadNew↺

☐ 0

▼

 /

Name▼

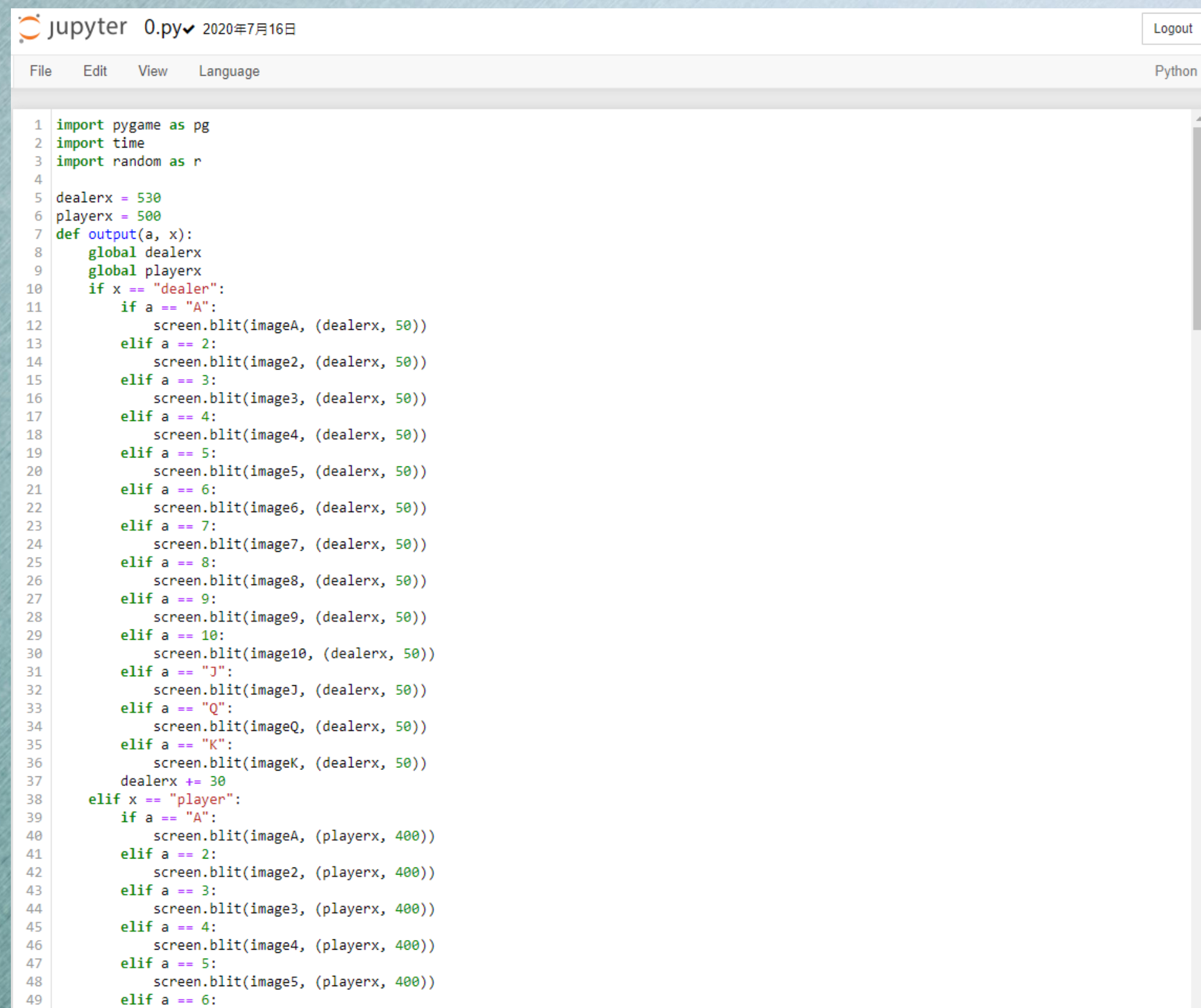
Last Modified

File size

<input type="checkbox"/>	3D Objects	1 個月前
<input type="checkbox"/>	anaconda3	2 個月前
<input type="checkbox"/>	ansel	1 年前
<input type="checkbox"/>	Contacts	1 個月前
<input type="checkbox"/>	Desktop	2 天前
<input type="checkbox"/>	Documents	1 個月前
<input type="checkbox"/>	Downloads	1 個月前
<input type="checkbox"/>	Favorites	1 個月前
<input type="checkbox"/>	Links	1 個月前
<input type="checkbox"/>	Music	1 個月前
<input type="checkbox"/>	OneDrive	1 小時前
<input type="checkbox"/>	Pictures	1 個月前
<input type="checkbox"/>	Roaming	1 年前
<input type="checkbox"/>	Saved Games	1 個月前
<input type="checkbox"/>	Searches	1 個月前
<input type="checkbox"/>	Videos	1 個月前

Anaconda + Jupyter Notebook

需要下載但可使用進階功能

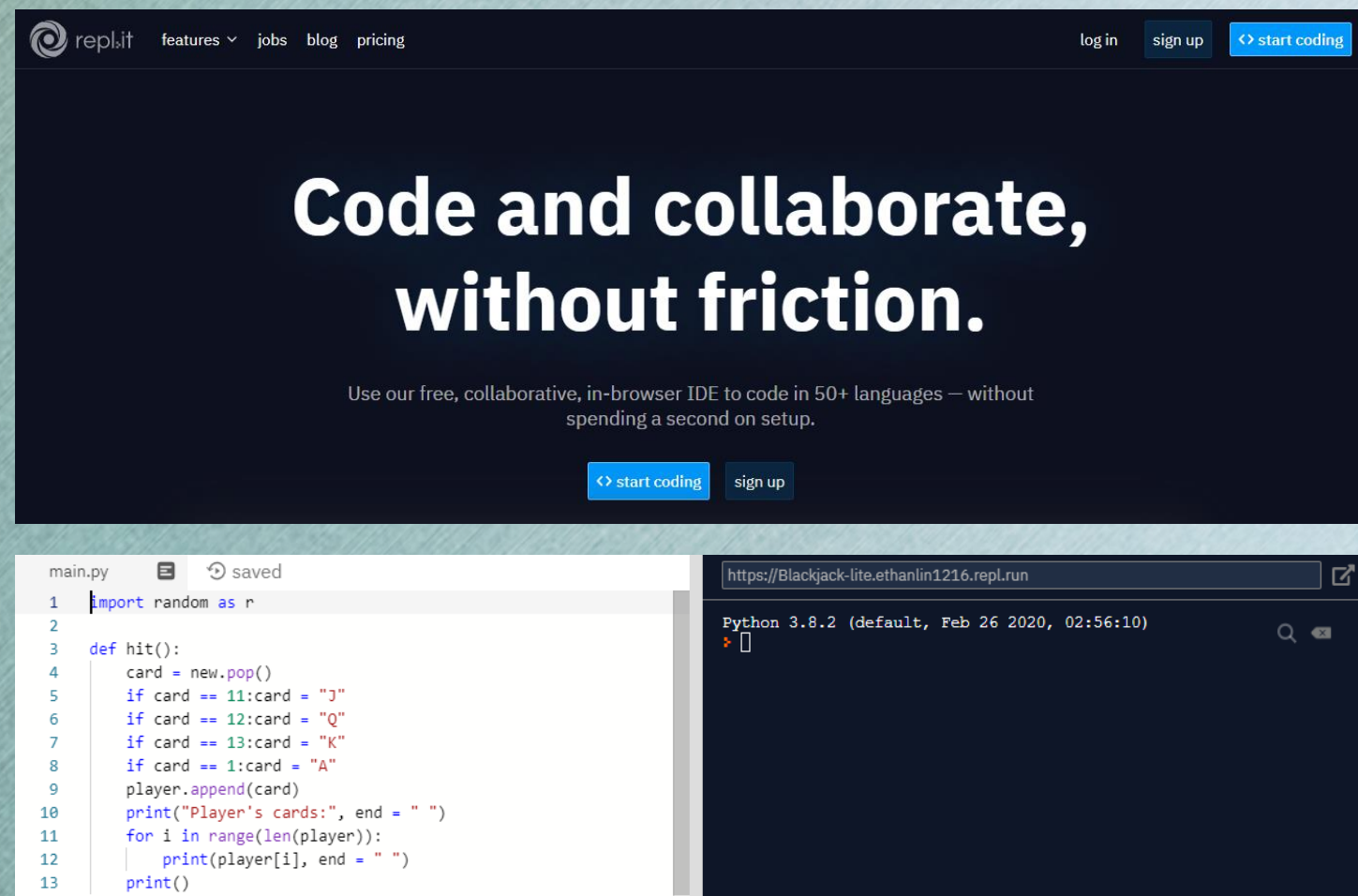


The screenshot displays a Jupyter Notebook interface. At the top, the header shows the Jupyter logo, the filename '0.py', and the date '2020年7月16日'. A 'Logout' button is located in the top right corner. Below the header is a menu bar with 'File', 'Edit', 'View', and 'Language' options. The 'Language' dropdown is set to 'Python'. The main area contains a Python script with line numbers 1 through 49. The script imports 'pygame as pg', 'time', and 'random as r'. It defines variables 'dealerx = 530' and 'playerx = 500'. A function 'output(a, x)' is defined, which uses 'global' variables 'dealerx' and 'playerx'. Inside this function, there are two main branches: one for 'dealer' (lines 10-36) and one for 'player' (lines 38-49). Each branch contains an 'if' statement that checks for card values 'A', '2', '3', '4', '5', '6', '7', '8', '9', '10', 'J', 'Q', and 'K', and then calls 'screen.blit' to place a corresponding image at a specific x-coordinate and y-coordinate (50 for dealer, 400 for player). The dealer's x-coordinate is incremented by 30 after each card is dealt.

```
1 import pygame as pg
2 import time
3 import random as r
4
5 dealerx = 530
6 playerx = 500
7 def output(a, x):
8     global dealerx
9     global playerx
10    if x == "dealer":
11        if a == "A":
12            screen.blit(imageA, (dealerx, 50))
13        elif a == 2:
14            screen.blit(image2, (dealerx, 50))
15        elif a == 3:
16            screen.blit(image3, (dealerx, 50))
17        elif a == 4:
18            screen.blit(image4, (dealerx, 50))
19        elif a == 5:
20            screen.blit(image5, (dealerx, 50))
21        elif a == 6:
22            screen.blit(image6, (dealerx, 50))
23        elif a == 7:
24            screen.blit(image7, (dealerx, 50))
25        elif a == 8:
26            screen.blit(image8, (dealerx, 50))
27        elif a == 9:
28            screen.blit(image9, (dealerx, 50))
29        elif a == 10:
30            screen.blit(image10, (dealerx, 50))
31        elif a == "J":
32            screen.blit(imageJ, (dealerx, 50))
33        elif a == "Q":
34            screen.blit(imageQ, (dealerx, 50))
35        elif a == "K":
36            screen.blit(imageK, (dealerx, 50))
37        dealerx += 30
38    elif x == "player":
39        if a == "A":
40            screen.blit(imageA, (playerx, 400))
41        elif a == 2:
42            screen.blit(image2, (playerx, 400))
43        elif a == 3:
44            screen.blit(image3, (playerx, 400))
45        elif a == 4:
46            screen.blit(image4, (playerx, 400))
47        elif a == 5:
48            screen.blit(image5, (playerx, 400))
49        elif a == 6:
```


repl.it (教學使用)

免費、免安裝、雲端存檔



右上角sign up

可以用Google帳號註冊

A sign up form with a white background. At the top, there are three social media icons: Google, GitHub, and Facebook. Below these is a red-bordered box containing a "username" input field. Below the username field is an "email" input field, and below that is a "password" input field. At the bottom left, there is a checkbox labeled "I'm a teacher". At the bottom right, there is a link "or log in". A large red arrow points from the text "可以用Google帳號註冊" to the Google icon.

註冊完成後... 如何開新檔案

帳號/檔名

執行 →

run ▶

share + new repl

Files

main.py

main.py saved

1 | Not sure what to do? Run some examples (start typing to dismiss)

程式編輯區

https://example.ethanlin1216.repl.run

Python 3.8.2 (default, Feb 26 2020, 02:56:10)

結果顯示區

Node.js TheTomatoPie / Repl.it Search

Create Repl

最後...
按 Create Repl

Hello, World!

寫程式的第一步

為什麼是"Hello, World!" ?

- https://zh.wikipedia.org/wiki/Hello_World
- 已成為一種慣例
- 確認編譯器、程式開發環境及運行環境是否安裝妥當

Hello, World!

如何在python 中輸出"Hello, World!"

```
print("Hello, World!")
```

- print()是python中的輸出，相當於C++的cout
- 因為要輸出的是字串，所以加上""
- 檢查右邊有沒有出現文字

```
1 print("Hello, World!")
```

```
Hello, World!
```


Online Judge

檢核自己的好幫手



zerojudge

高中生程式解題系統
題庫難度中至中上
題目量最多
最為通用

<https://zerojudge.tw/>

CKEISC Judge

電研OJ

社團自己的OJ
相關比賽或考試大部分都
會辦在這裡
題目量雖少但很關鍵

<https://oj.ckeisc.nctu.me/>
[https://ckeisc2.ck.tp.edu.t
w/](https://ckeisc2.ck.tp.edu.tw/)

台中女中程式解題系統

Green Judge, An Online Judge System for TCGS

中女OJ

台中女中的OJ
俗稱Green judge
題庫難度下至中下
適合初學者

[http://www.tcgs.tc.edu.tw:
1218/](http://www.tcgs.tc.edu.tw:1218/)



Snakify

專門for python的OJ
基本到應用題型都有
優點是分主題整理的題目
題庫難度中

缺點是只有英文
(或你看得懂日文的話
<https://snakify.org/en/>

zerojudge

申請帳號

右上角註冊->Google帳號->學校

- 可用Google帳號註冊
- 登記學校是為了統計
- 一段至二段間可能會有一次zj上的競賽

尋題目關鍵字、題號...



登入

註冊

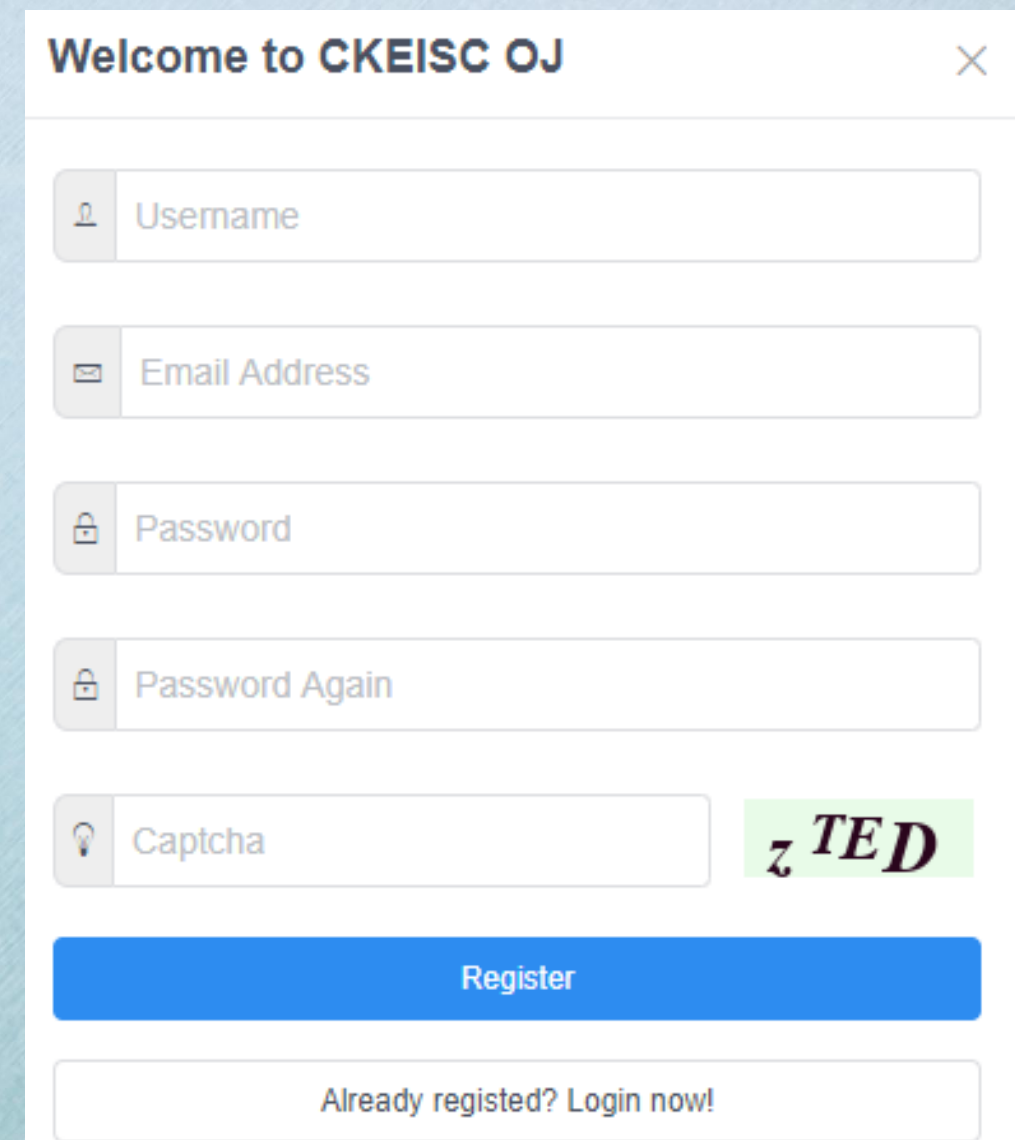
以現有的 Google 帳號創建身份

電研OJ

申請帳號

右上角Register->如右圖

- 只有社團內的人員
- 主要比賽或考試會在這裡
- 因為不能用Google帳號所以要記得自己帳密



The image shows a registration form titled "Welcome to CKEISC OJ" with a close button (X) in the top right corner. The form contains the following fields and elements:

- Username:** A text input field with a user icon on the left.
- Email Address:** A text input field with an envelope icon on the left.
- Password:** A text input field with a lock icon on the left.
- Password Again:** A text input field with a lock icon on the left.
- Captcha:** A text input field with a lightbulb icon on the left, followed by a green box containing the text "TED".
- Register:** A blue button with the text "Register".
- Already registred? Login now!:** A link at the bottom of the form.

Q&A / 練習時間

歡迎提問~

Hello world系列題目

- ZJ d483
- CKEISC OJ #000

課程結束～

還有什麼想問的都可以問喔～