在 Mac 上執行 Calculator 和 Plotter 程式

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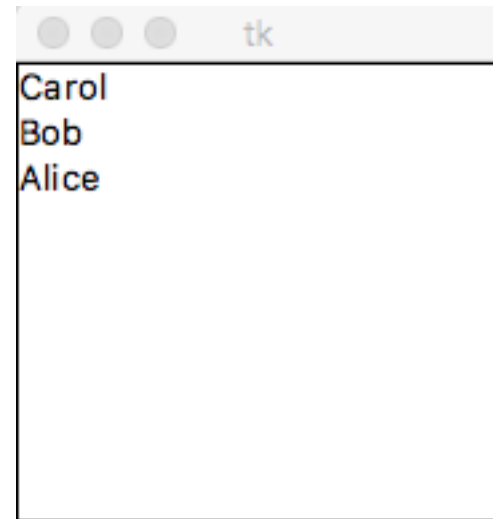
安裝套件

- 打開terminal
- 確認tkinter套件已安裝
  - $ python3
  - >>> import tkinter
  - >>>
- 安裝pillow套件
  - $ pip3 install pillow
- 安裝matplotlib套件
  - $ pip3 install matplotlib
- 確認套件已安裝
  - $ python3
  - >>> import PIL
  - >>> import matplotlib
  - >>>

```
(venv) Alicias-MacBook-Air:tkinter aliciatsai$ python3
Python 3.6.2 (v3.6.2:5fd33b5926, Jul 16 2017, 20:11:06)
[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> import tkinter
>>> import PIL
>>> import matplotlib
>>>
```
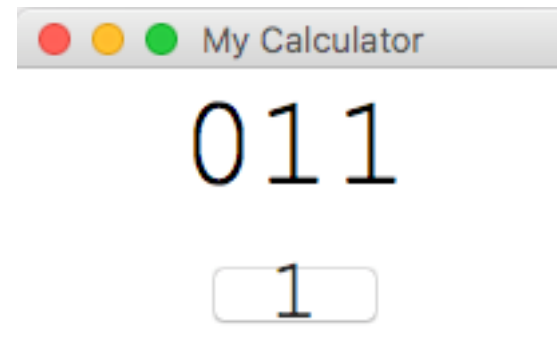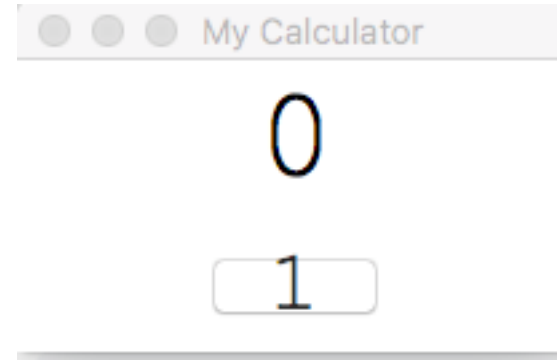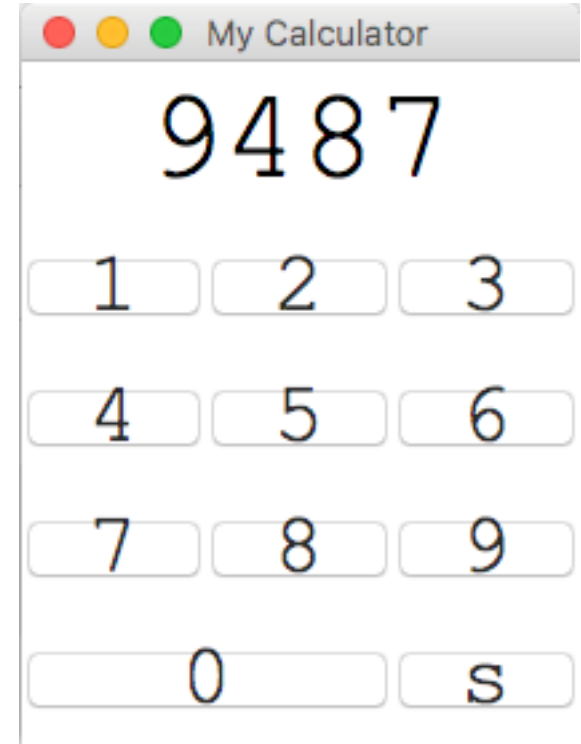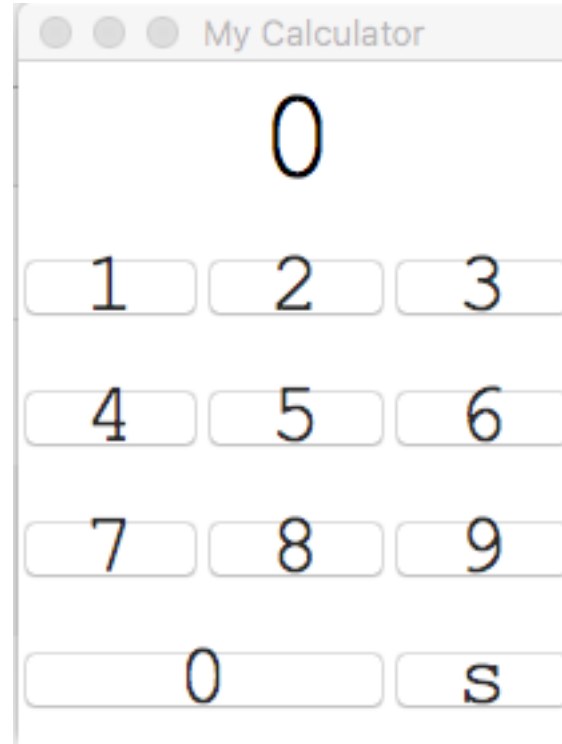
eg1.py

- 執行eg1.py
  - $python3 eg1.py

Calculator1.py

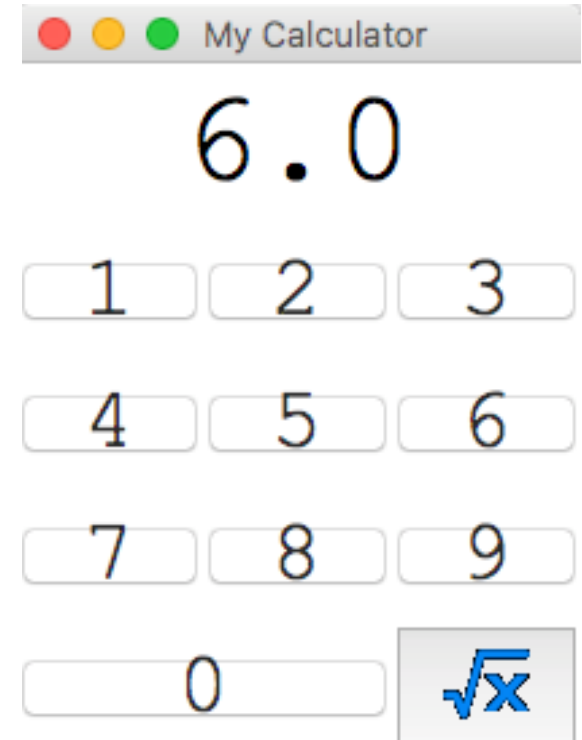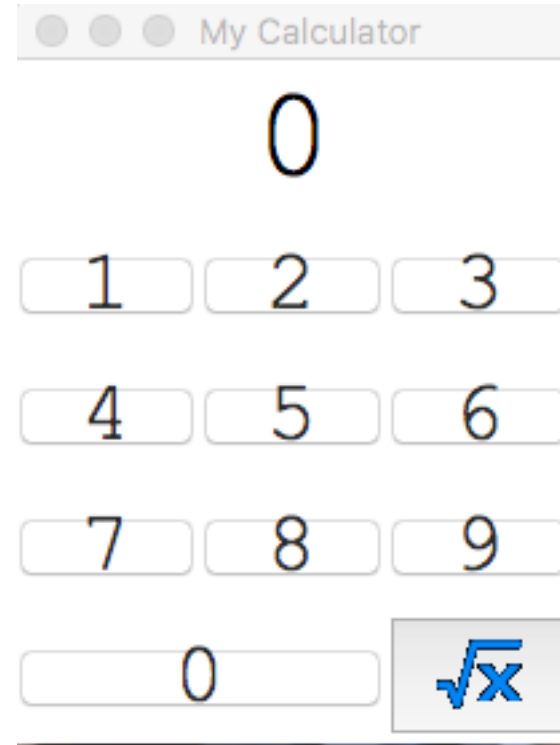- 執行Calculator1.py
  - $ python3 Calculator1.py

Calculator2.py

- 執行Calculator2.py
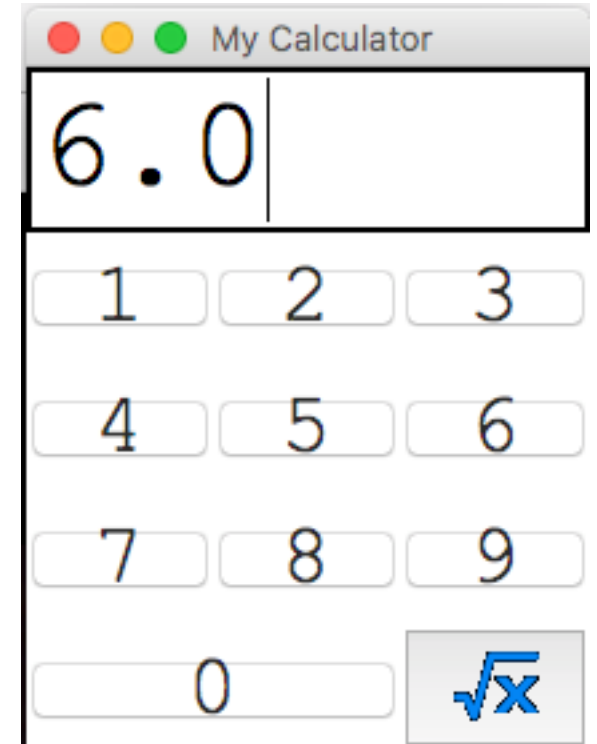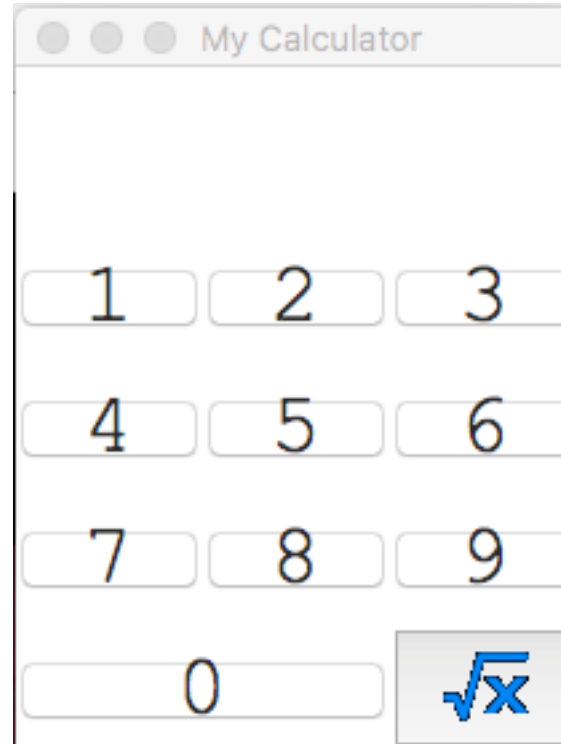 - $ python3 Calculator2.py

Calculator3.py
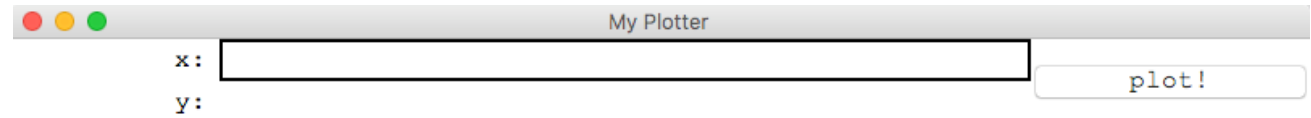
- 執行Calculator3.py
  - $ python3 Calculator3.py

Calculator4.py

- 執行Calculator4.py
  - $ python3 Calculator4.py

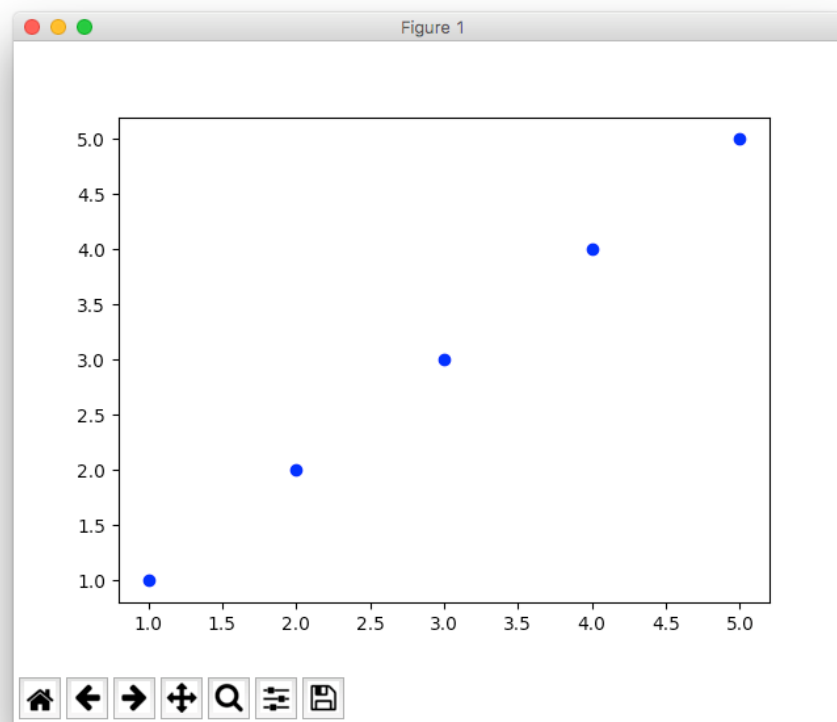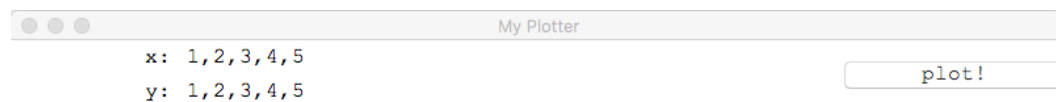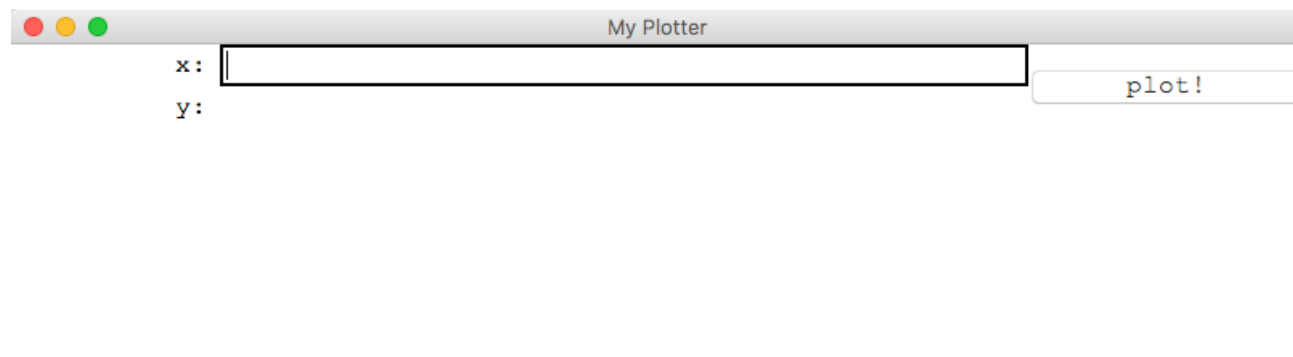# Plotter1.py

- 執行Plotter1.py
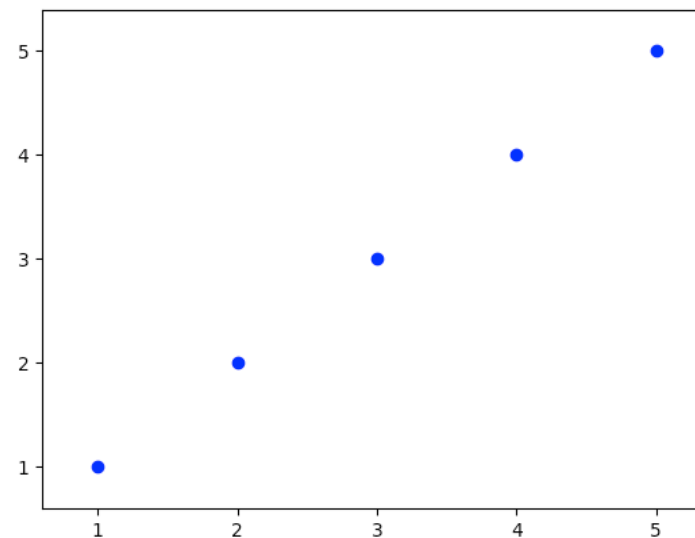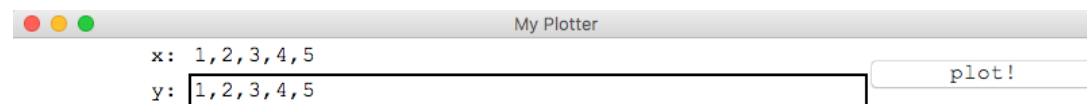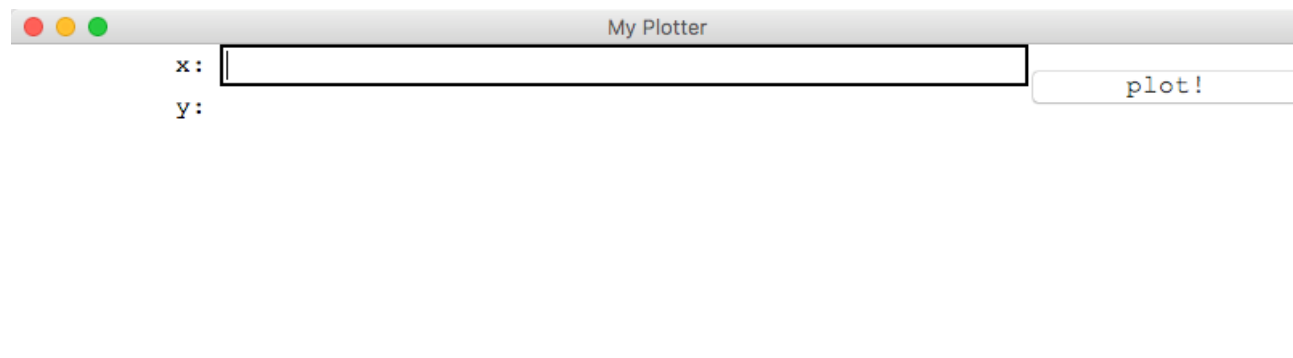 - $ python3 Plotter1.py

- 逗號後面請勿加空白！

Plotter2.py

- 修改Plotter2.py
  - 在最上面加入以下兩行程式碼
    - **import matplotlib**
    - **matplotlib.use("TkAgg")**
- 執行Plotter2.py
  - $ python3 Plotter2.py
- 逗號後面請勿加空白！

Plotter3.py

- 修改Plotter3.py
  - 在最上面加入以下兩行程式碼
    - **import matplotlib**
    - **matplotlib.use("TkAgg")**
- 執行Plotter3.py
  - $ python3 Plotter3.py
- 逗號後面請勿加空白！

Plotter4.py


```
(venv) Alicias-MacBook-Air:Lecture 10 GUI aliciatsai$ python3 Plotter3.py
sh: del: command not found

^C
Traceback (most recent call last):
  File "Plotter3.py", line 63, in <module>
    pl.mainloop()
  File "/Library/Frameworks/Python.framework/Versions/3.6/lib/python3.6/tkinter/__init__.py", line 1277, in mainloop
    self.tk.mainloop(n)
KeyboardInterrupt
(venv) Alicias-MacBook-Air:Lecture 10 GUI aliciatsai$
```

- 修改Plotter3_coordinate.py
  - 在最上面加入以下兩行程式碼
    - **import matplotlib**
    - **matplotlib.use("TkAgg")**
- 強制停止執行Plotter3.py
  - 關掉Plotter3 GUI
  - Terminal會出現sh: del: command not found
  - 按Control + C 強制關閉
  - 重新回到terminal (會看到$)
- 執行Plotter3_coordinate.py
  - $ python3 Plotter3_coordinate.py
- 逗號後面請勿加空白！