





具加密弱點檔案的掃描工具

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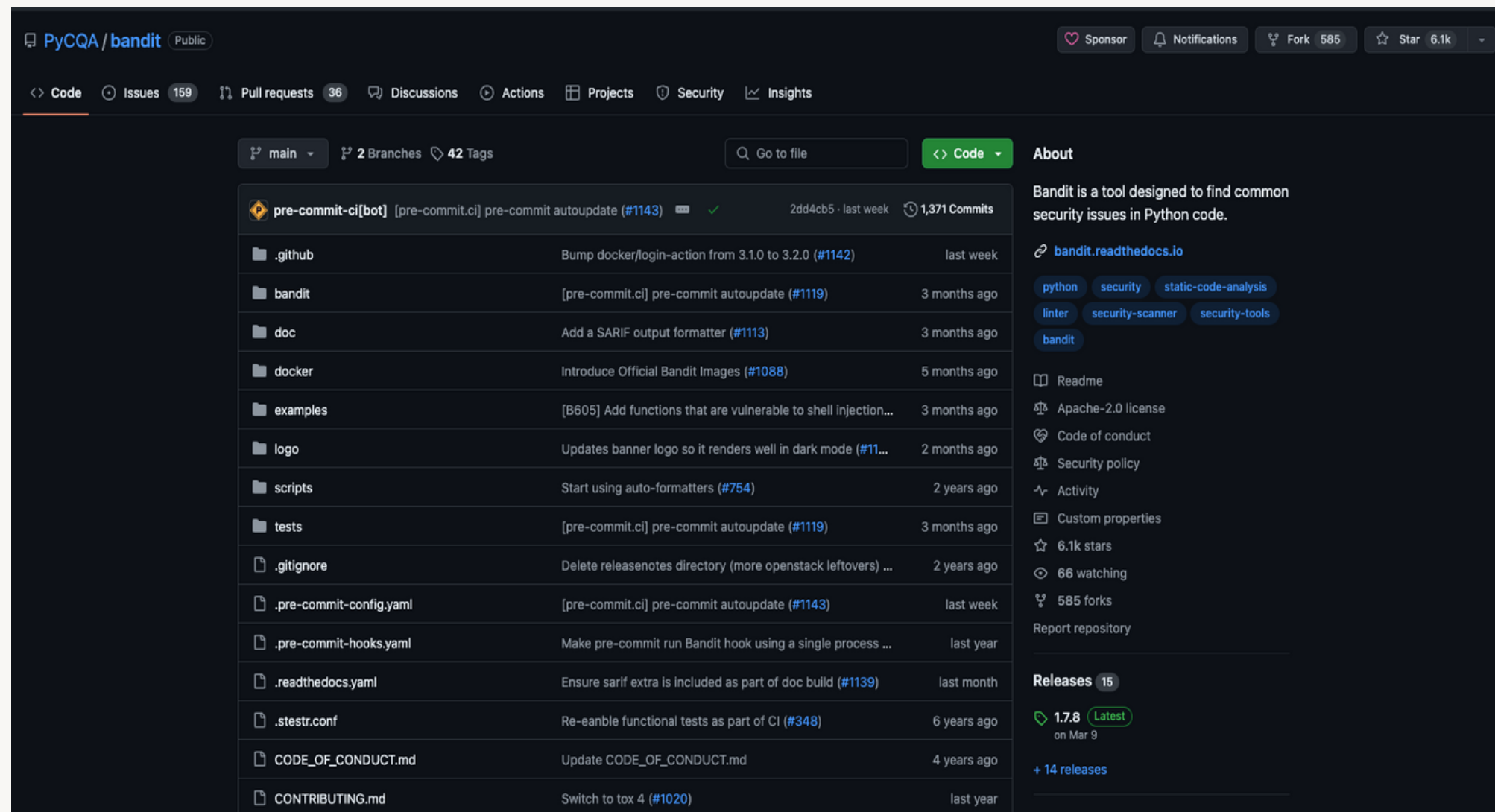


Overview

- 相關知識介紹
- 架構圖
- 程式碼演示
- 時間排程
- 遭遇的困難以及挑戰
- 心得



bandit



1.開源

2.安全漏洞檢測

3.用戶可編寫自定義規則

4.詳細的報告

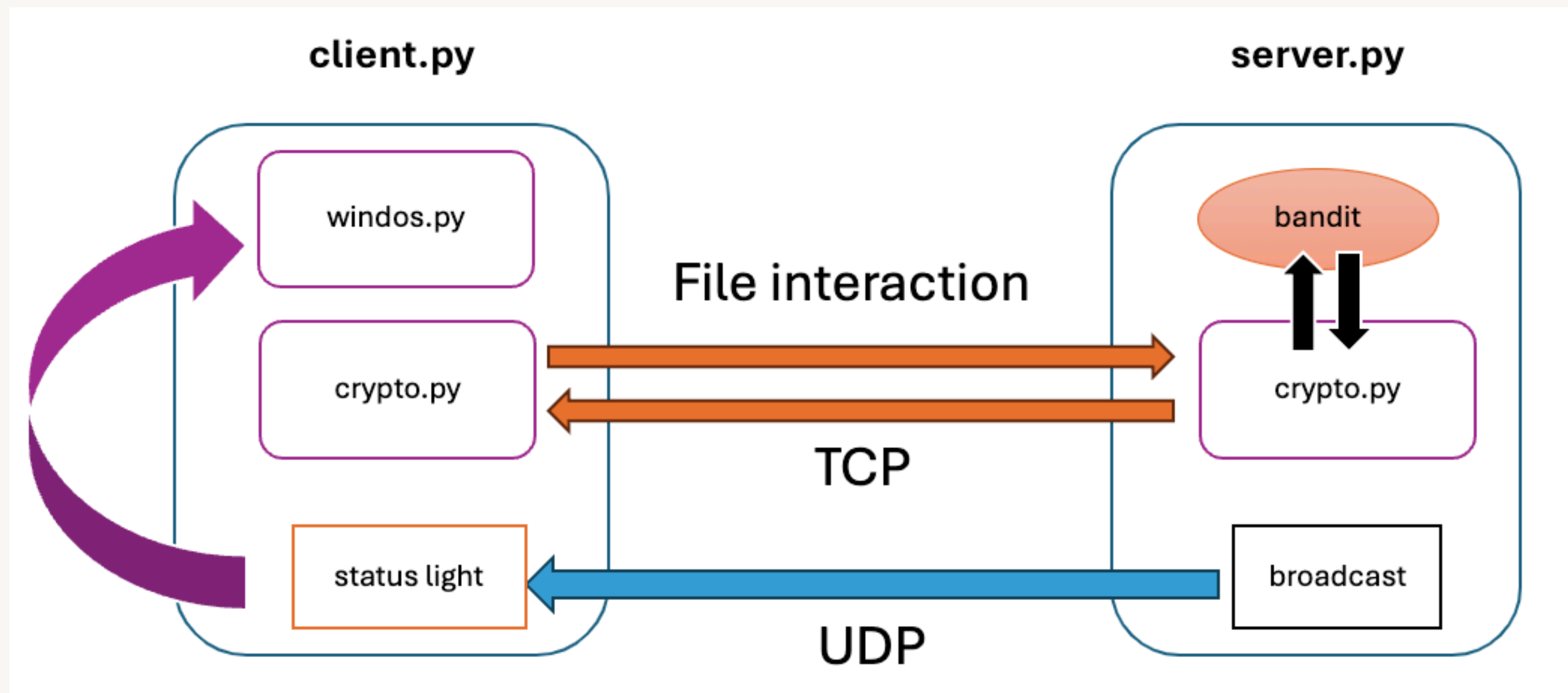
5.可自動化掃描

混合加密法

- 1.一方生成**公私鑰**以及**對稱金鑰**。
- 2.另一方拿到公鑰後，先拿對稱金鑰對資料加密。
- 3.資料加密完後利用公鑰對對稱金鑰加密，將兩者都傳給對方。
- 4.一方拿到兩者後，先用私鑰對對稱金鑰解密，拿解密後的對稱金鑰對資料進行解密。

	對稱加密	非對稱加密
優點	加密快	金鑰儲存安全
缺點	金鑰容易被人知道	加密慢

架構圖



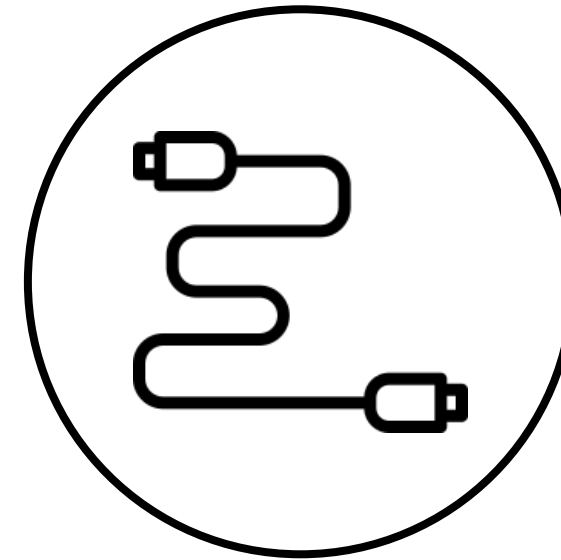
專案檔案結構



- windows.py



- crypto.py
- public_key
- private_key



- client.py
- server.py




測試檔案

- 1.bad.py -> command injection
- 2.cominj.py -> command injection
- 3.SQLinj.py -> SQL injection
- 4.xss.py -> XSS

執行過程

Form

檔案掃描工具

status light 

Upload File

clear

Save File

Send To Server

達成條件（基本要求）

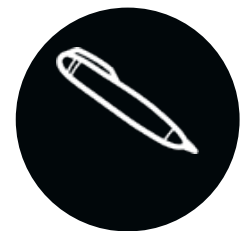
1. 須用到TCP與UDP
2. 須用到broadcast(廣播)與multicast(群播)擇一
3. server須用到多工技術 擇一使用：non-block,select, multi-thread
4. client須用GUI 可使用c#或python tkinter或pyQt

時間規劃

	6/2	6/3	6/4	6/5	6/6	6/7	6/8
初版視窗以及想法 構思							
檔案傳輸的過程以 及信號連結							
狀態燈 (broadcast功能)							
重新設計視窗							
新增其他按鈕功能							
加密模塊							



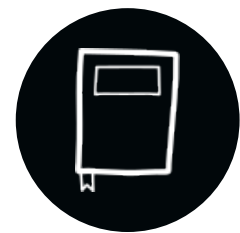
遭遇的困難以及挑戰



客戶端的寄送與收到資訊（累積兩天）



GUI設計頁面的版面配置



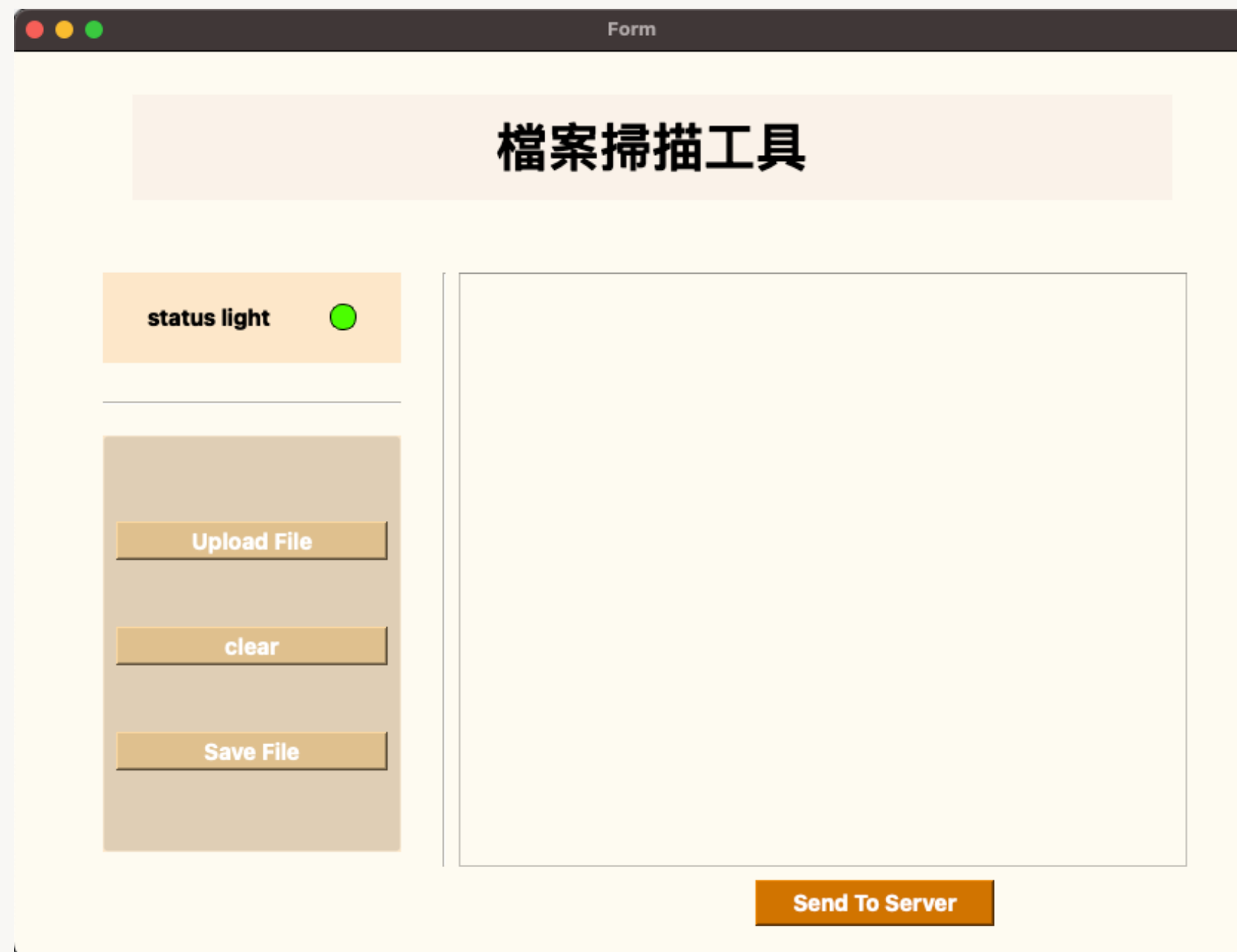
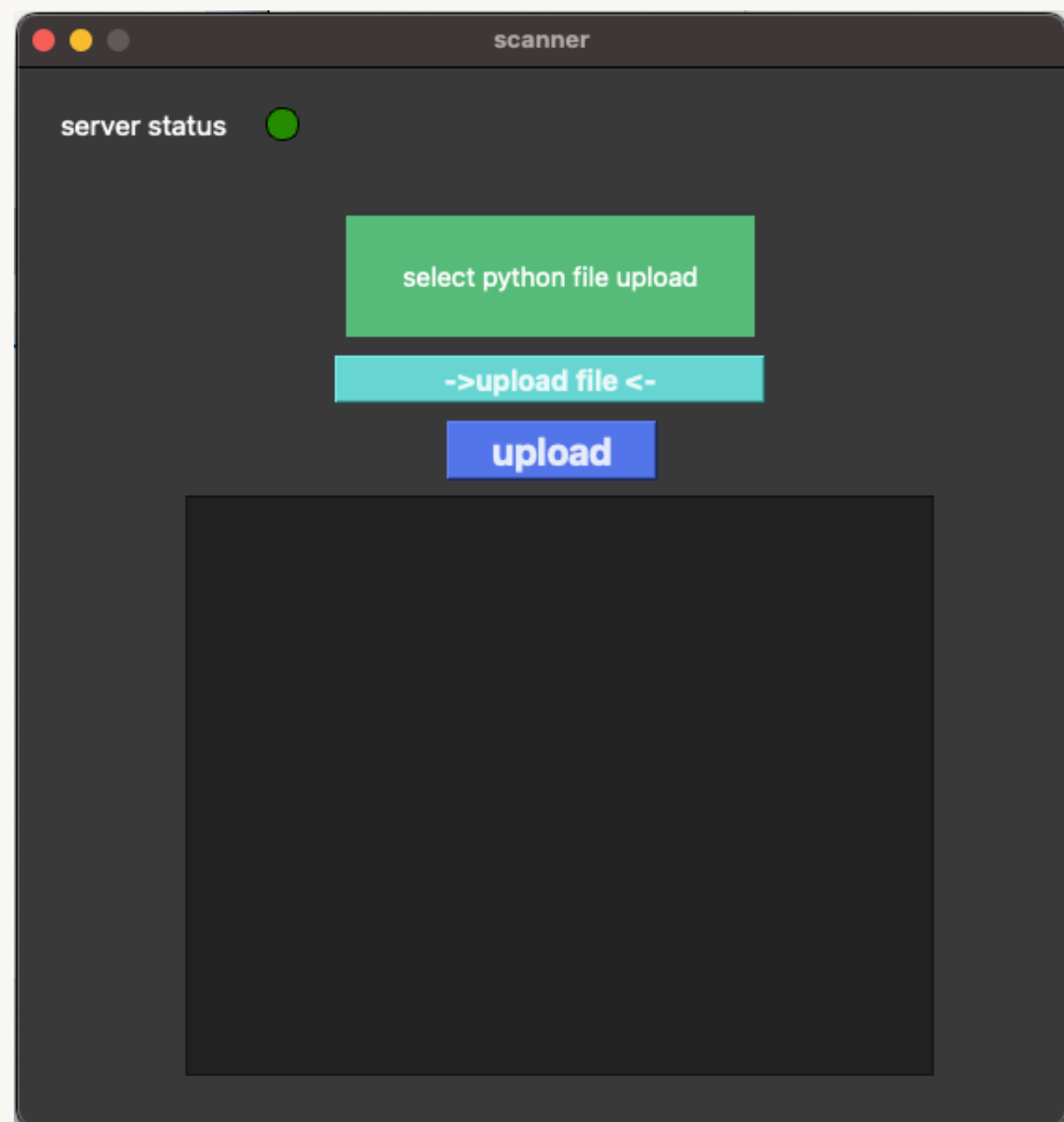
Gui要在parent thread 才能做更改



Gui重做object name抓不到（累積5hr）



GUI設計頁面的版面配置(累積一天)



Gui要在main thread 才能做更改(8hour)

```
QObject: Cannot create children for a parent that is in a different thread.
(Parent is QTextDocument(0x13a720460), parent's thread is QThread(0x14a656180), current thread is
QThread(0x13a752900)
[1] 22564 segmentation fault python client.py
```

QObject: Cannot create children for a parent that is in a different thread. PyQt5

Asked 4 years ago Modified 3 years, 10 months ago Viewed 3k times

- When I try to change the text of a text browser which is inside a scroll area I get this PyQt5 threading error:
- QObject: Cannot create children for a parent that is in a different thread. (Parent is QTextDocument(0x212e3bb1f50), parent's thread is QThread(0x212e171e220))
- I assume it is because of the scroll area and that I don't have access to it from the thread I am trying to change this from and it works if I put the same bit of code...

```
filepath = ".."
with open(filepath, "r") as f:
    contents = f.read()
    #print(contents)
    self.log_1.setText(contents)
```

(and yes I am aware that the filepath is "..", used for file security.) ...inside the thread that the scrollarea is created inside it works completely fine.

The Overflow Blog

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1 Answer

Sorted by: Highest score (default)

- You should not directly modify the GUI from another thread, one way to modify the GUI indirectly from another thread is to use the Qt signals:

```
import threading
from PyQt5 import QtCore, QtGui, QtWidgets
from mcstatus import MinecraftServer

class Ui_MainWindow(object):
    def setupUi(self, MainWindow):
        # ...

class Worker(QtCore.QObject):
    logged = QtCore.pyqtSignal(str)
    statusChanged = QtCore.pyqtSignal(bool)

    def start(self):
        threading.Timer(0.2, self._execute, daemon=True).start()

    def _execute(self):
        threading.Timer(0.2, self._execute, daemon=True).start()
        ip = ".."
        port = 25565 # Server 1
        server = MinecraftServer(ip, port)

        try:
            filepath = ".."
            with open(filepath, "r") as f:
                contents = f.read()
                self.logged.emit(contents)
        except IOError as e:
            self.statusChanged.emit(False)
        else:
            self.statusChanged.emit(True)
```


自學的技術



- bandit



- PyQt
- Qt designer



參考資料

- <https://steam.oxxostudio.tw/category/python/pyqt5/start.html>
- <https://www.youtube.com/watch?v=wWyWFULmxj4&list=PL0uF99K6uCYPp2hv99pcUPpkUtiDWjGdW&index=1>
- <https://zhung.com.tw/article/%E7%94%A8qt-designer%E4%BE%86%E8%A8%AD%E8%A8%88pyqt-gui%E6%87%89%E7%94%A8%E7%A8%8B%E5%BC%8F%E7%95%8C%E9%9D%A2/>
- <https://www.cnblogs.com/dechinphy/p/bandit.html>
- <https://cwe.mitre.org/>

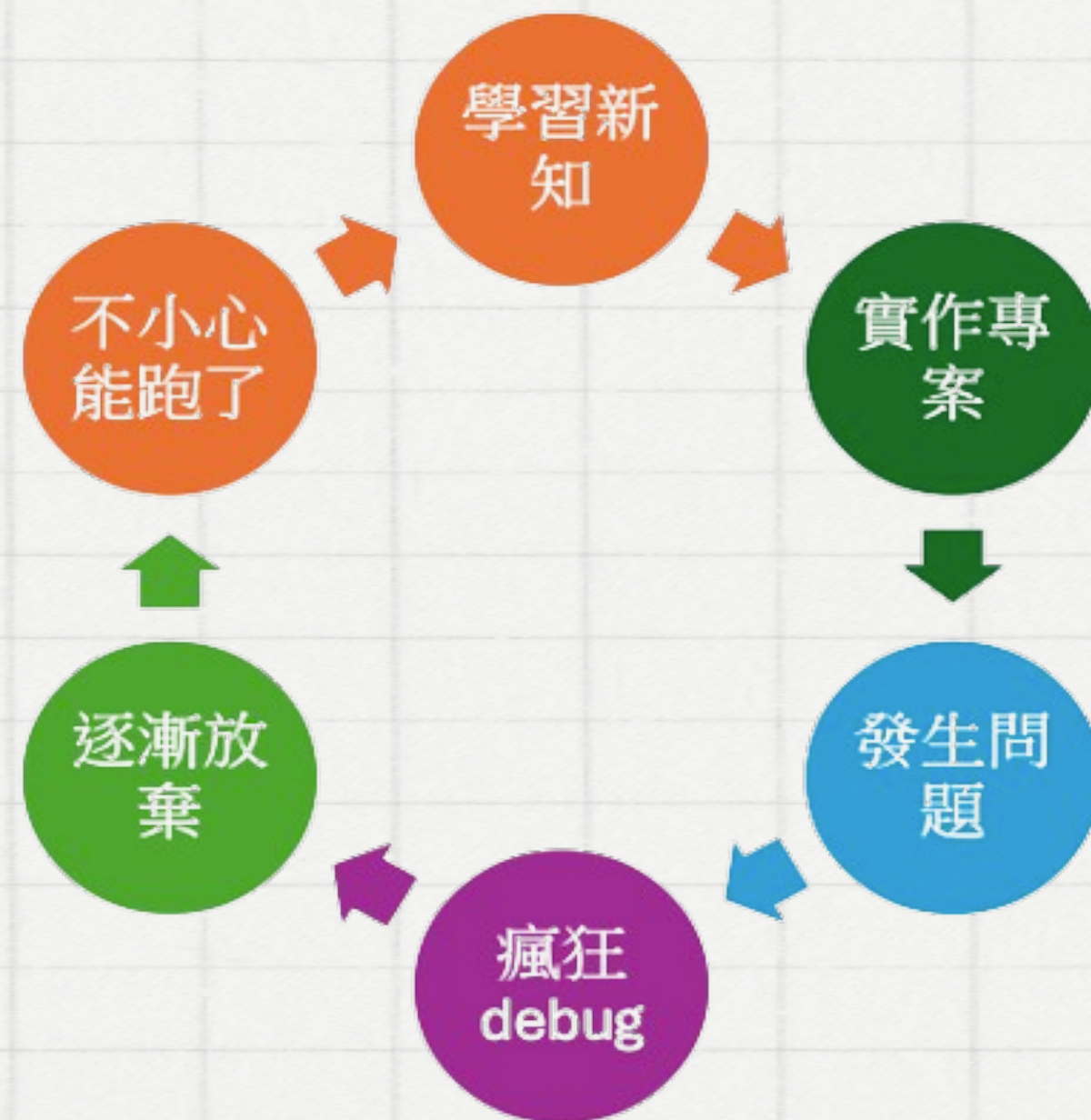


有時間可以延伸

- 自己寫一個靜態分析器。
- 可以做一個多用戶系統，具有登入頁面，用來控制用戶權限以及控管使用次數。
- 圖形界面具有更高的可讀性以及美化。



心得



感謝聆聽

