

# 實作三

## 教你實作寫出一隻比特幣帳戶 的全自動金流追蹤程式

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# 範例下載

- `git clone https://github.com/rslu2000/wannacry\_tracking`
- `sudo apt-get update`
- `sudo apt-get install python-pip` (作用： )
- `sudo pip install bs4` (作用： )
- `sudo pip install html5lib` (作用： )

# 執行過程

- `cd wannacry_tracking`
- `python btcaccounttrack.py`
- `python btcaccounttrack_py2.py`
- `python3 btcaccounttrack_py3.py`

# 執行結果

```
ta01@abccoin-01:~/wannacry_tracking$ python btcaccounttrack py2.py
```

```
Taiwan local time: Thu Aug 17 02:12:42 2017
```

```
WannaCry Account_01 = 14.50067602 BTC
```

```
WannaCry Account_02 = 17.77113037 BTC
```

```
WannaCry Account_03 = 19.74510304 BTC
```

```
Number Transactions in account_01 = 115 txs
```

```
Number Transactions in account_02 = 114 txs
```

```
Number Transactions in account_03 = 130 txs
```

```
WannaCry total received = 52.01690943 BTC
```

```
WannaCry total received = 91029.5915025 USD (in the rate 1BTC=1750 USD)
```

```
WannaCry total received = 2749093.66338 NT (in the rate 1USD=30.2 TWD)
```

```
WannaCry total transactions received= 359 txs
```

```
WannaCry average received per transaction = 0.144893898134 BTC
```

```
WannaCry average received per transaction = 253.564321734 USD
```

```
WannaCry average received per transaction = 7657.64251637 NT
```

```
台灣本地時間: Thu Aug 17 02:12:44 2017
```

```
勒索軟體WannaCry總共收到贖款共 = 52.01690943 比特幣
```

```
勒索軟體WannaCry總共收到贖款共: 91029.5915025 美元 (以1比特幣=1750美元換算)
```

```
勒索軟體WannaCry總共收到贖款共: 2749093.66338 新台幣 (以1美元=30.2新台幣換算)
```

```
勒索軟體WannaCry總共收到贖款筆數: 359 筆
```

```
勒索軟體WannaCry平均每筆贖款 = 0.144893898134 比特幣
```

```
勒索軟體WannaCry平均每筆贖款 = 253.564321734 美元
```

```
勒索軟體WannaCry平均每筆贖款 = 7657.64251637 新台幣
```

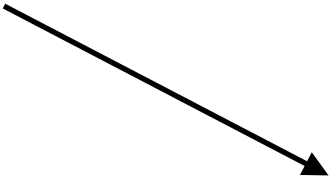
```
ta01@abccoin-01:~/wannacry_tracking$
```

# 程式碼觀念講解

```
# -*- coding: utf-8 -*-
import requests
import time
print 'Taiwan local time:', time.ctime()
from bs4 import BeautifulSoup
res1 = requests.get("https://blockchain.info/address/115p7UMMngo1pMvkpHiJcRdfJNXj6LrLn")
res2= requests.get("https://blockchain.info/address/12t9YDPgwueZ9NyMgw519p7AA8isjr6SMw")
res3= requests.get("https://blockchain.info/address/13AM4VW2dhxYgXeQepoHkHSQuy6NgaEb94")
soup1=BeautifulSoup(res1.text,"html5lib")
soup2=BeautifulSoup(res2.text,"html5lib")
soup3=BeautifulSoup(res3.text,"html5lib")
for n1 in soup1.select("#total_received"):
    print 'WannaCry Account_01 = ',n1.text
for n2 in soup2.select("#total_received"):
    print 'WannaCry Account_02 = ',n2.text
for n3 in soup3.select("#total_received"):
    print 'WannaCry Account_03 = ',n3.text
total = float(n1.text.replace(' BTC','')) + float(n2.text.replace(' BTC','')) +
float(n3.text.replace(' BTC',''))
print 'WannaCry total received =', total, 'BTC'
print 'WannaCry total received =', total*1750, 'USD' , '(in the rate 1BTC=1750 USD)'
print 'WannaCry total received =', total*1750*30.2, 'USD' , '(in the rate 1USD=30.2 TWD)'
print '勒索軟體WannaCry總共收到贖款共：', total*1750, '美元' , '(以1比特幣=1750美元換算)'
print '勒索軟體WannaCry總共收到贖款共：', total*1750*30.2, '新台幣' , '(以1美元=30.2新台幣換算)'
```

# 觀念補充講解

```
# -*- coding: utf-8 -*-
import requests
import time
print 'Taiwan local time:', time.ctime()
from bs4 import BeautifulSoup
res1 = requests.get("https://blockchain.info/address/115p7UMMngo1pMvkpHiJcRdfJNXj6LrLn?format=json")
res2= requests.get("https://blockchain.info/address/12t9YDPgwueZ9NyMgw519p7AA8isjr6SMw")
res3= requests.get("https://blockchain.info/address/13AM4VW2dhxYgXeQepoHkHSQuy6NgaEb94")
soup1=BeautifulSoup(res1.text,"html5lib")
soup2=BeautifulSoup(res2.text,"html5lib")
soup3=BeautifulSoup(res3.text,"html5lib")
for n1 in soup1.select("#total_received"):
    print 'WannaCry Account_01 = ',n1.text
for n2 in soup2.select("#total_received"):
    print 'WannaCry Account_02 = ',n2.text
for n3 in soup3.select("#total_received"):
    print 'WannaCry Account_03 = ',n3.text
total = float(n1.text.replace(' BTC','')) + float(n2.text.replace(' BTC','')) + float(n3.text.replace(' BTC',''))
print 'WannaCry total received =', total, 'BTC'
print 'WannaCry total received =', total*1750, 'USD' , '(in the rate 1BTC=1750 USD)'
print 'WannaCry total received =', total*1750*30.2, 'USD' , '(in the rate 1USD=30.2 TWD)'
print '勒索軟體WannaCry總共收到贖款共:', total*1750, '美元' , '(以1比特幣=1750美元換算)'
print '勒索軟體WannaCry總共收到贖款共:', total*1750*30.2, '新台幣' , '(以1美元=30.2新台幣換算)'
```



https://blockchain.info/address/115p7UMMngo1pMvkpHijcRdfJNXj6LrLn

Blockchain Luxembourg S.A.R.L [LU]

https://blockchain.info/address/115p7UMMngo1pMvkpHijcRdfJNXj6LrLn

BLOCKCHAIN

WALLET

CHARTS

STATS

MARKETS

API

Search for block hash, transaction, address, etc

Bitcoin Address

Addresses are identifiers which you use to send bitcoins to another person.

Summary

Address115p7UMMngo1pMvkpHijcRdfJNXj6LrLn

Hash 16000e8fd98ca34f195b020af4a8b1c7238653d4212

ToolsRelated Tags - Unspent Outputs

Transactions

No. Transactions115

Total Received14.50067602 BTC

Final Balance0.09 BTC

Request Payment

Donation Button

Transactions (Oldest First)

Filter

9f7d5958b94ec65622adf54d3e69d564215fca11eefd55f306dee9aab161ac50

2017-08-09 13:55:31

1N4CsydtBV5WbrfYgXKWXkdYguG8LxuECo

➔

115p7UMMngo1pMvkpHijcRdfJNXj6LrLn

0.09 BTC

0.09 BTC

Featured sponsor



```
{
  "hash160": "00e8fd98ca34f195b020af4a8b1c7238663d4212",
  "address": "115p7UMMngoJ1pMvKpHjCrdFJNXj6LrLn",
  "n_tx": 115,
  "total_received": 1450067602,
  "total_sent": 1441067602,
  "final_balance": 9000000,
  "txs": [
    {
      "ver": 1,
      "inputs": [
        {
          "sequence": 4294967294,
          "prev_out": {
            "spent": true,
            "tx_index": 273801272,
            "type": 0,
            "addr": "1N4CsydtBV6WbrfYgXKWXkdYguG8LxuECo",
            "value": 60706530,
            "n": 1,
            "script": "76a914e6f5ce2bc06b165e72266a67fc424dd67d0120e388ac"
          },
          "script": "4730440220375cc38e55188aec4d967cbcc48713b335df7d8086b1321e4097e46efa63602802201fa6cc7aa2b3a79200815aeefe32e3b81681e9f65c7d14c151f6d3d2a9758ecef32c1bale247acb3d0b94bba6aa9f3b26225aa773d6"
        }
      ],
      "block_height": 479819,
      "relayed_by": "85.224.105.99",
      "out": [
        {
          "spent": false,
          "tx_index": 273802319,
          "type": 0,
          "addr": "115p7UMMngoJ1pMvKpHjCrdFJNXj6LrLn",
          "value": 9000000,
          "n": 0,
          "script": "76a91400e8fd98ca34f195b020af4a8b1c7238663d421288ac"
        },
        {
          "spent": false,
          "tx_index": 273802319,
          "type": 0,
          "addr": "1JshgSSHosZBpDHmJHEuPwYsexUYzCcEYa",
          "value": 1000000,
          "n": 1,
          "script": "76a914c410e4f3e85e492df45bbfe2bd1890b0c395a04d88ac"
        }
      ]
    }
  ]
}
```



# 實作後的結論與得到的觀念

- 公有鏈上的區塊，交易內容都是透明的
- 比特幣這種公有鏈，只能查到錢包地址的內容與金流往來，但不知道這錢包是誰的
- 當然也不知道是誰匯進來的？匯出去給誰？
- 當今網路通訊 除了xml格式做交換外，json格式已經成為主流