

# 08170120 巨資二 A 鄭雅綿

## Q1.

程式碼：

```
import fileinput

min_value = float("inf")

old_key = None

for line in fileinput.input():

    data = line.strip().split("\t")

    if len(data) != 2:

        continue

    current_key, current_value = data

    if old_key and old_key != current_key:

        print(old_key, "\t", min_value)

        old_key = current_key

        min_value = float("inf")

    old_key = current_key

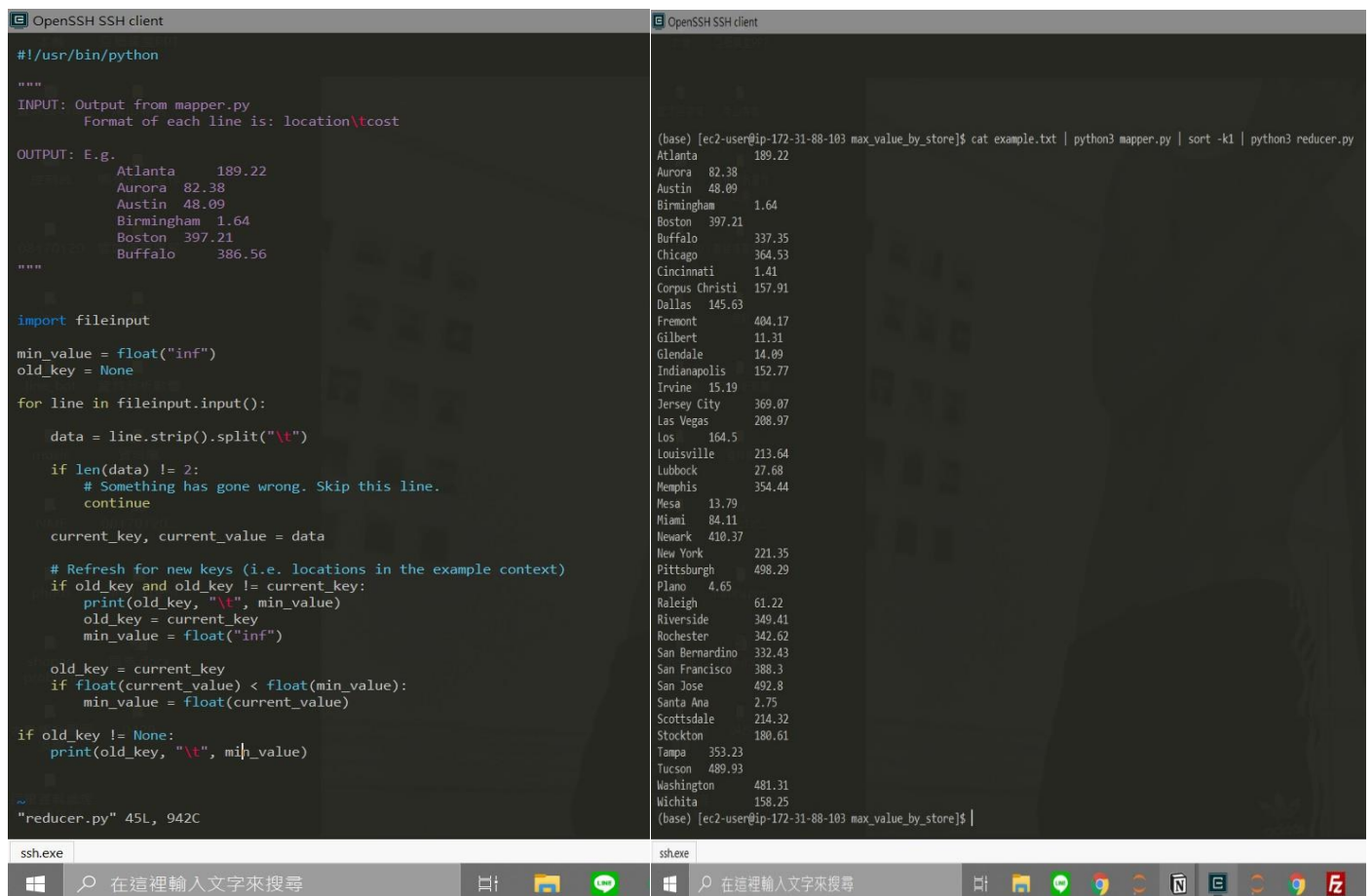
    if float(current_value) < float(min_value):

        min_value = float(current_value)

if old_key != None:

    print(old_key, "\t", min_value)
```

圖片：



```
#!/usr/bin/python
"""
INPUT: Output from mapper.py
Format of each line is: location\tcost

OUTPUT: E.g.
Atlanta      189.22
Aurora       82.38
Austin       48.09
Birmingham  1.64
Boston       397.21
Buffalo      386.56
"""

import fileinput

min_value = float("inf")
old_key = None

for line in fileinput.input():

    data = line.strip().split("\t")

    if len(data) != 2:
        # Something has gone wrong. Skip this line.
        continue

    current_key, current_value = data

    # Refresh for new keys (i.e. locations in the example context)
    if old_key and old_key != current_key:
        print(old_key, "\t", min_value)
        old_key = current_key
        min_value = float("inf")

    old_key = current_key
    if float(current_value) < float(min_value):
        min_value = float(current_value)

if old_key != None:
    print(old_key, "\t", min_value)

"reducer.py" 45L, 942C
```

```
(base) [ec2-user@ip-172-31-88-103 max_value_by_store]$ cat example.txt | python3 mapper.py | sort -k1 | python3 reducer.py
Atlanta      189.22
Aurora       82.38
Austin       48.09
Birmingham  1.64
Boston       397.21
Buffalo      337.35
Chicago      364.53
Cincinnati   1.41
Corpus Christi 157.91
Dallas       145.63
Fremont       404.17
Gilbert       11.31
Glendale      14.09
Indianapolis  152.77
Irvine        15.19
Jersey City   369.07
Las Vegas    208.97
Los Angeles  164.5
Louisville    213.64
Lubbock       27.68
Memphis       354.44
Mesa          13.79
Miami         84.11
Newark        410.37
New York     221.35
Pittsburgh    498.29
Plano         4.65
Raleigh       61.22
Riverside     349.41
Rochester     342.62
San Bernardino 332.43
San Francisco 388.3
San Jose      492.8
Santa Ana     2.75
Scottsdale    214.32
Stockton      180.61
Tampa         353.23
Tucson        489.93
Washington    481.31
Wichita       158.25
(base) [ec2-user@ip-172-31-88-103 max_value_by_store]$
```

## Q2.

程式碼：

```
import fileinput

value = 0

num = 0

old_key = None

for line in fileinput.input():

    data = line.strip().split("\t")

    if len(data) != 2:

        continue

    current_key,current_value = data

    if old_key and old_key != current_key:

        print(old_key,"\t",value)

        old_key = current_key

        value = 0

        num = 0

    old_key = current_key

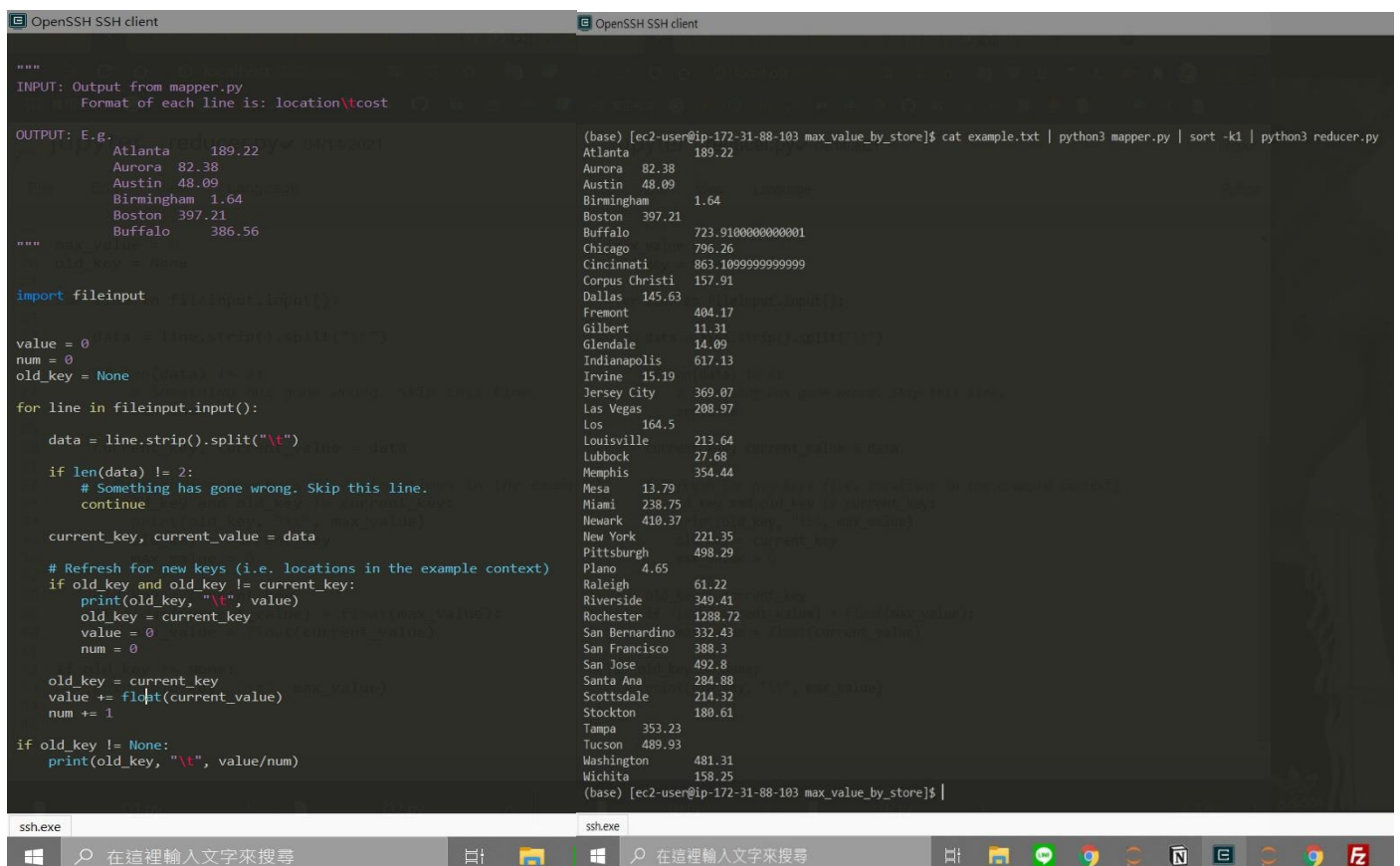
    value += float(current_value)

    num += 1

if old_key != None:

    print(old_key,"\t",value/num)
```

圖片：



```
OpenSSH SSH client (base) [ec2-user@ip-172-31-88-103 max_value_by_store]$ cat example.txt | python3 mapper.py | sort -k1 | python3 reducer.py

INPUT: Output from mapper.py
Format of each line is: location\tcost

OUTPUT: E.g.
Atlanta 189.22
Aurora 82.38
Austin 48.09
Birmingham 1.64
Boston 397.21
Buffalo 386.56

(base) [ec2-user@ip-172-31-88-103 max_value_by_store]$ cat example.txt | python3 mapper.py | sort -k1 | python3 reducer.py

import fileinput

value = 0
num = 0
old_key = None

for line in fileinput.input():

    data = line.strip().split("\t")

    if len(data) != 2:

        # Something has gone wrong. Skip this line.
        continue

    current_key, current_value = data

    # Refresh for new keys (i.e. locations in the example context)
    if old_key and old_key != current_key:

        print(old_key, "\t", value)

        old_key = current_key

        value = 0
        num = 0

    old_key = current_key

    value += float(current_value)

    num += 1

if old_key != None:

    print(old_key, "\t", value/num)
```