



Python 學習檔案

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1.BMI 計算

執行結果:

```

Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\4-4-2BMI計算.py =====
請輸入體重KG? 40
請輸入身高M? 1.6
15.624999999999996
體重過輕
>>>
===== RESTART: C:\Users\USER\Downloads\4-4-2BMI計算.py =====
請輸入體重KG? 50
請輸入身高M? 1.6
19.531249999999996
體重正常
>>>
===== RESTART: C:\Users\USER\Downloads\4-4-2BMI計算.py =====
請輸入體重KG? 65
請輸入身高M? 1.6
25.390624999999996
體重過重
>>>
===== RESTART: C:\Users\USER\Downloads\4-4-2BMI計算.py =====
請輸入體重KG? 70
請輸入身高M? 1.6
27.343749999999996
體重肥胖
>>>
Ln: 27 Col:

```

程式碼:

```

*4-4-2BMI計算.py - C:\Users\USER\Downloads\4-4-2BMI計算.py (3.6.5)*
File Edit Format Run Options Window Help
體重 = float(input('請輸入體重KG? '))#請輸入體重
身高 = float(input('請輸入身高M? '))#請輸入身高(M)
BMI = 體重/(身高*身高)
print(BMI)#BMI計算完畢印出來
if BMI < 18: #判斷BMI是否小於18
    print("體重過輕")#若小於18則體重過輕
elif BMI < 24: #判斷BMI是否小於24
    print("體重正常")#若小於24則體重正常
elif BMI < 27: #判斷BMI是否小於27
    print("體重過重")#若小於27則體重過重
else: #若BMI超過27則跳到else
    print("體重肥胖")#印出體重肥胖
Ln: 12 Col: 22

```

2. 猜數字

執行結果:

```

Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\5-3-5猜數字.py =====
請輸入1到99的數字? 30
猜小一點
請輸入1到99的數字? 20
猜大一點
請輸入1到99的數字? 35
猜小一點
請輸入1到99的數字? 25
猜小一點
請輸入1到99的數字? 23
猜中了
>>>
Ln: 15 Col: 4

```

程式碼:

```

*5-3-5猜數字.py - C:\Users\USER\Downloads\5-3-5猜數字.py (3.6.5)*
File Edit Format Run Options Window Help
import random#導入隨機函數
目標值 = random.randint(1, 99)#預設目標值1到99
猜測值 = 0#預設猜測值為0
while 目標值 != 猜測值:#若猜測值不等於目標值則進入該迴圈
    猜測值 = int(input("請輸入1到99的數字?"))#使用者輸入一個數字
    if 目標值 < 猜測值:#若目標值小於猜測值則印出猜小一點
        print('猜小一點')
    elif 目標值 > 猜測值:#若目標值大於猜測值則印出猜大一點
        print('猜大一點')
    else:#若目標值不小於也不大於猜測值則等於就是目標值則印出猜中了
        print('猜中了')
Ln: 10 Col: 36

```

3.複利計算

執行結果:

```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\3-5-6複利計算.py =====
請輸入本金? 100000
請輸入年利率? 15
第一年本利和為 114999.99999999999
第二年本利和為 132249.99999999997
第三年本利和為 152087.49999999997
>>>
```

程式碼:

```
*3-5-6複利計算.py - C:\Users\USER\Downloads\3-5-6複利計算.py (3.6.5)*
File Edit Format Run Options Window Help
本金 = float(input('請輸入本金?'))#請輸入本金
年利率 = float(input('請輸入年利率?'))#請輸入年利率
第一年本利和 = 本金 * (1 + 年利率 * 0.01)#計算第一年的本利和
第二年本利和 = 本金 * (1 + 年利率 * 0.01) ** 2#計算第二年的本利和
第三年本利和 = 本金 * (1 + 年利率 * 0.01) ** 3#計算第三年的本利和
print("第一年本利和為", 第一年本利和)#印出第一年的本利和
print("第二年本利和為", 第二年本利和)#印出第二年的本利和
print("第三年本利和為", 第三年本利和)#印出第三年的本利和
```

4.帳號密碼驗證

執行結果:

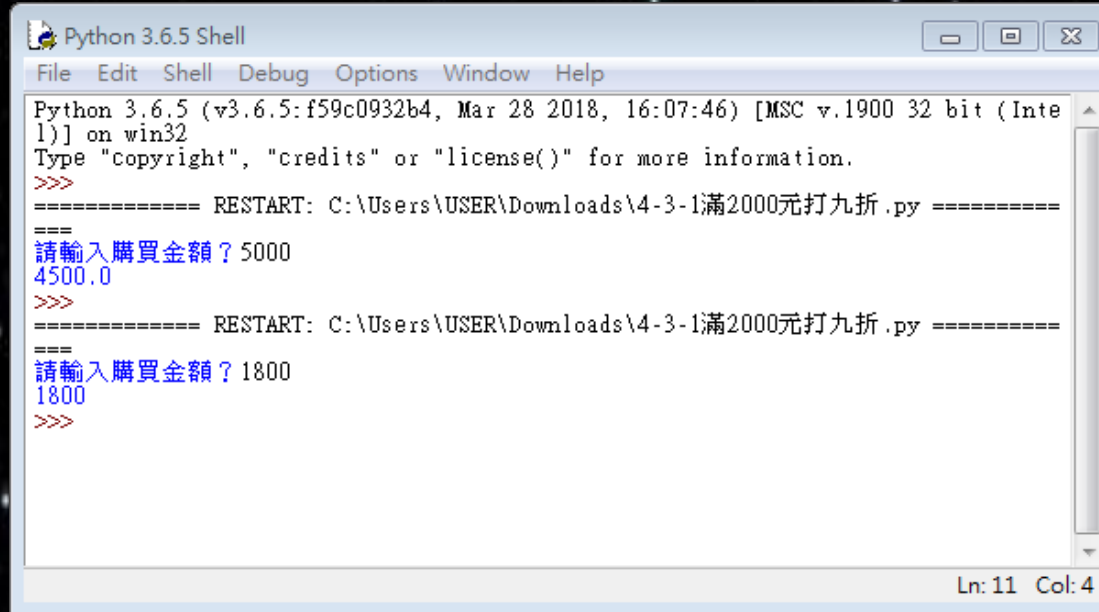
```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\4-3-3帳號密碼驗證.py =====
====
請輸入帳號? john
請輸入密碼? 123
登入成功
>>>
===== RESTART: C:\Users\USER\Downloads\4-3-3帳號密碼驗證.py =====
====
請輸入帳號? nicole
請輸入密碼? 123
登入失敗
>>>
```

程式碼:

```
*4-3-3帳號密碼驗證.py - C:\Users\USER\Downloads\4-3-3帳號密碼驗證.py (3.6.5)*
File Edit Format Run Options Window Help
帳號 = input('請輸入帳號?')#請輸入帳號
密碼 = input('請輸入密碼?')#請輸入密碼
if 帳號 == 'john' and 密碼 == '123': #帳號設為john密碼設為123
    print('登入成功')#若帳號密碼皆輸入正確則印出登入成功
else:#若帳號密碼都錯誤或一項錯誤
    print('登入失敗')#則印出登入失敗
```

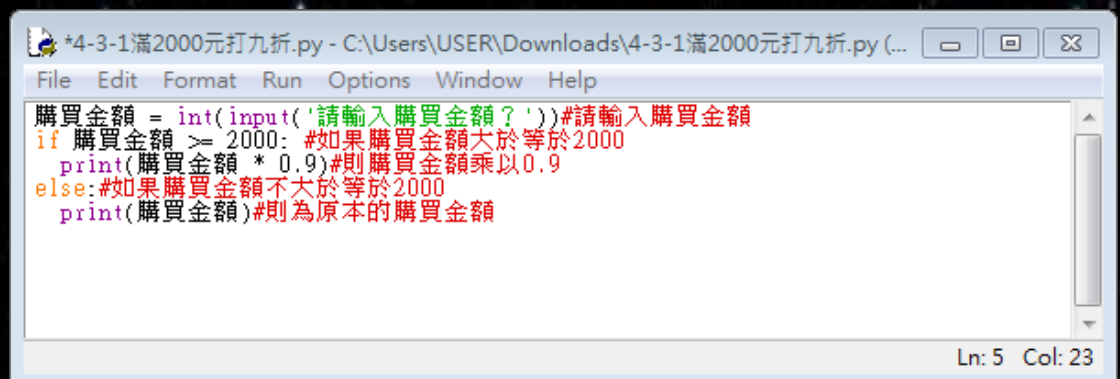
5.滿 2000 元打九折

執行結果:



```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\4-3-1滿2000元打九折.py =====
===
請輸入購買金額? 5000
4500.0
>>>
===== RESTART: C:\Users\USER\Downloads\4-3-1滿2000元打九折.py =====
===
請輸入購買金額? 1800
1800
>>>
```

程式碼:



```
*4-3-1滿2000元打九折.py - C:\Users\USER\Downloads\4-3-1滿2000元打九折.py (...
File Edit Format Run Options Window Help
購買金額 = int(input('請輸入購買金額?'))#請輸入購買金額
if 購買金額 >= 2000: #如果購買金額大於等於2000
    print(購買金額 * 0.9)#則購買金額乘以0.9
else:#如果購買金額不大於等於2000
    print(購買金額)#則為原本的購買金額
```

6. 擲骰子直到 6 為止

執行結果:

```

Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\QQ\Desktop\擲骰子直到6為止.py =====
=====
5
4
3
6
>>>
===== RESTART: C:\Users\QQ\Desktop\擲骰子直到6為止.py =====
=====
2
5
5
1
6
>>>
===== RESTART: C:\Users\QQ\Desktop\擲骰子直到6為止.py =====
=====
1
6
Ln: 16 Col: 0

```

程式碼:

```

擲骰子直到6為止.py - C:\Users\QQ\Desktop\擲骰子直到6為止.py (3.8.5)
File Edit Format Run Options Window Help
import random #導入 隨機 的函數
骰子 = random.randint(1, 6) #將骰子這個變數 給予隨機數字1到6的程式
print(骰子) #印出骰子的數字
while 骰子 != 6: #若骰子不等於6 則進入該迴圈 若等於六 就結束程式
    骰子 = random.randint(1, 6)
    print(骰子) #重新印出骰子的數字
Ln: 7 Col: 0

```


7.計算營業利益

執行結果:

```

Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\3-5-1計算營業利益.py =====
====
請輸入營業收入? 50000
請輸入營業成本? 10000
請輸入營業費用? 20000
營業利益為 20000
>>>
Ln: 9 Col: 4

```

程式碼:


```

+3-5-1計算營業利益.py - C:\Users\USER\Downloads\3-5-1計算營業利益.py (3.6.5)*
File Edit Format Run Options Window Help
營業收入 = int(input('請輸入營業收入?'))#請輸入營業收入
營業成本 = int(input('請輸入營業成本?'))#請輸入營業成本
營業費用 = int(input('請輸入營業費用?'))#請輸入營業費用
營業利益 = 營業收入 - 營業成本 - 營業費用#收入減掉成本及費用則算出營業利益
print("營業利益為",營業利益)#印出營業利益數字
Ln: 5 Col: 28

```

8.攝氏轉華氏

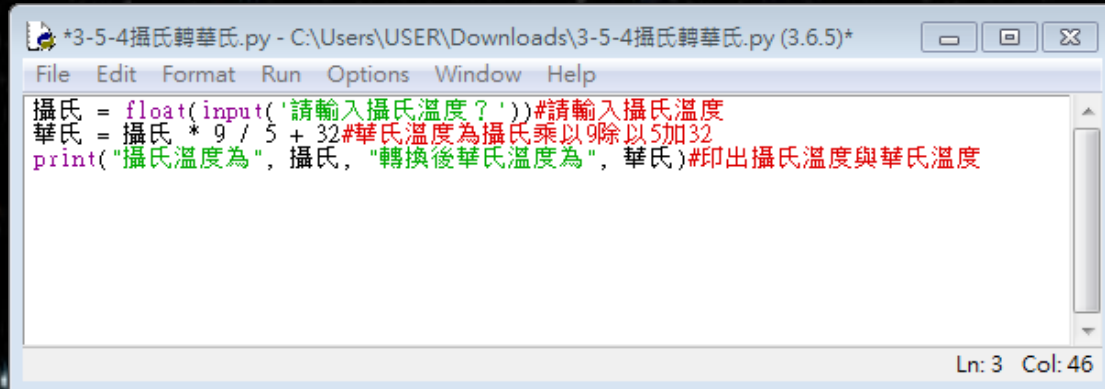
執行結果:



```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\3-5-4攝氏轉華氏.py =====
====
請輸入攝氏溫度? 30
攝氏溫度為 30.0 轉換後華氏溫度為 86.0
>>>
```

Ln: 7 Col: 4

程式碼:

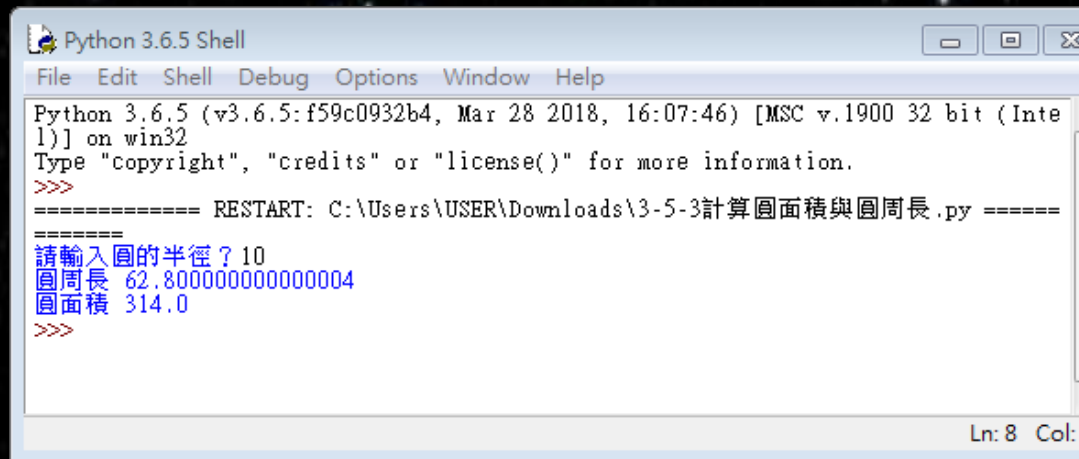


```
*3-5-4攝氏轉華氏.py - C:\Users\USER\Downloads\3-5-4攝氏轉華氏.py (3.6.5)*
File Edit Format Run Options Window Help
攝氏 = float(input('請輸入攝氏溫度?'))#請輸入攝氏溫度
華氏 = 攝氏 * 9 / 5 + 32#華氏溫度為攝氏乘以9除以5加32
print("攝氏溫度為", 攝氏, "轉換後華氏溫度為", 華氏)#印出攝氏溫度與華氏溫度
```

Ln: 3 Col: 46

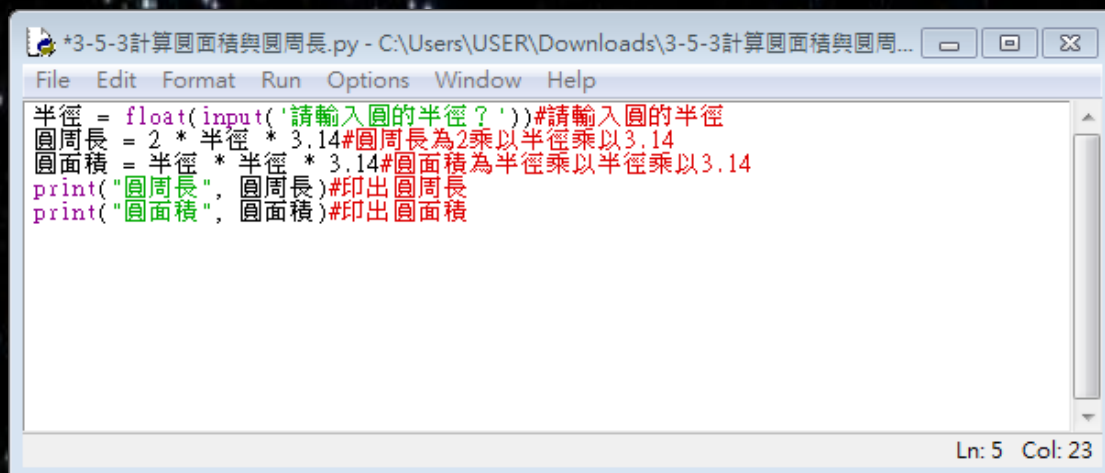
9. 計算圓面積與圓周長

執行結果:



```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\3-5-3計算圓面積與圓周長.py =====
請輸入圓的半徑? 10
圓周長 62.800000000000004
圓面積 314.0
>>>
```

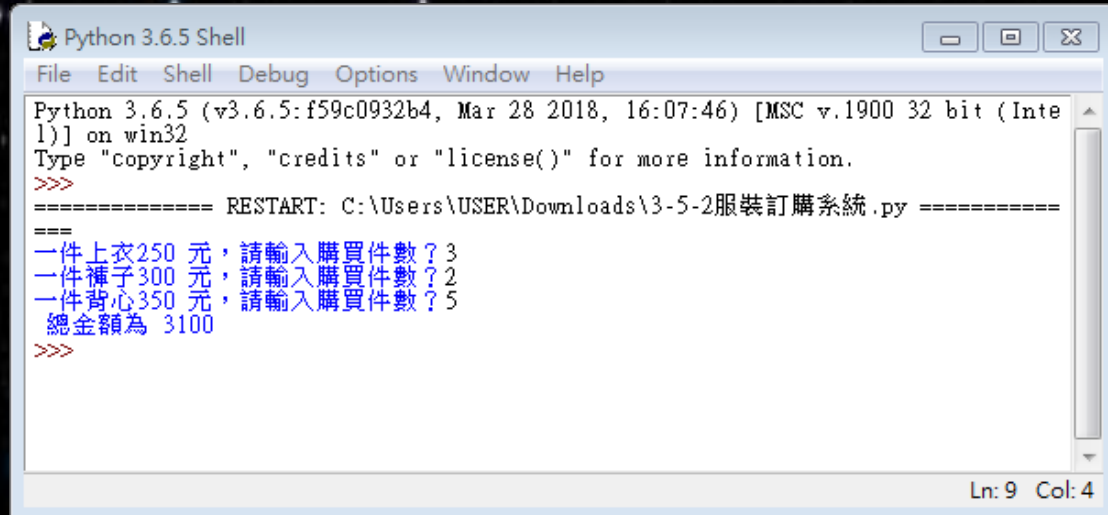
程式碼:



```
*3-5-3計算圓面積與圓周長.py - C:\Users\USER\Downloads\3-5-3計算圓面積與圓周...
File Edit Format Run Options Window Help
半徑 = float(input('請輸入圓的半徑?'))#請輸入圓的半徑
圓周長 = 2 * 半徑 * 3.14#圓周長為2乘以半徑乘以3.14
圓面積 = 半徑 * 半徑 * 3.14#圓面積為半徑乘以半徑乘以3.14
print("圓周長", 圓周長)#印出圓周長
print("圓面積", 圓面積)#印出圓面積
```

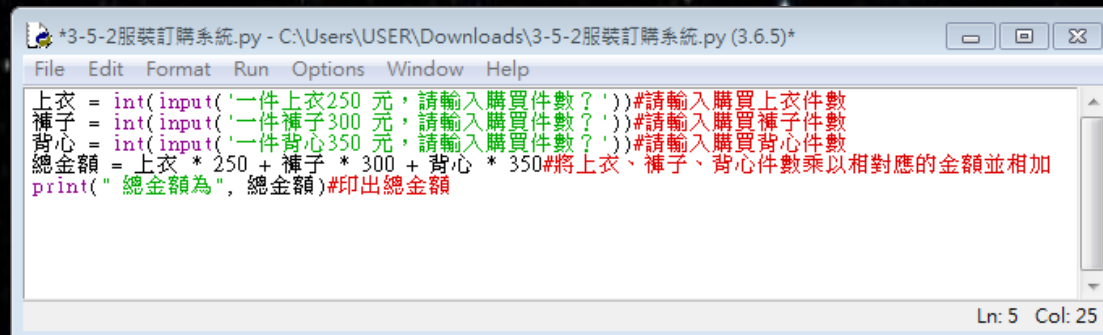
10. 服裝訂購系統

執行結果:



```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\3-5-2服裝訂購系統.py =====
===
一件上衣250 元，請輸入購買件數？3
一件褲子300 元，請輸入購買件數？2
一件背心350 元，請輸入購買件數？5
總金額為 3100
>>>
```

程式碼:



```
*3-5-2服裝訂購系統.py - C:\Users\USER\Downloads\3-5-2服裝訂購系統.py (3.6.5)*
File Edit Format Run Options Window Help
上衣 = int(input('一件上衣250 元，請輸入購買件數？'))#請輸入購買上衣件數
褲子 = int(input('一件褲子300 元，請輸入購買件數？'))#請輸入購買褲子件數
背心 = int(input('一件背心350 元，請輸入購買件數？'))#請輸入購買背心件數
總金額 = 上衣 * 250 + 褲子 * 300 + 背心 * 350#將上衣、褲子、背心件數乘以相對應的金額並相加
print(" 總金額為", 總金額)#印出總金額
```

11. 是否為 3 的倍數

執行結果:

```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/USER/Downloads/8.py =====
請輸入一個數字? 4353545345
4353545345 不是3的倍數
>>>
===== RESTART: C:/Users/USER/Downloads/8.py =====
請輸入一個數字? 123456
123456 是3的倍數
>>>
```

Ln: 11 Col: 4

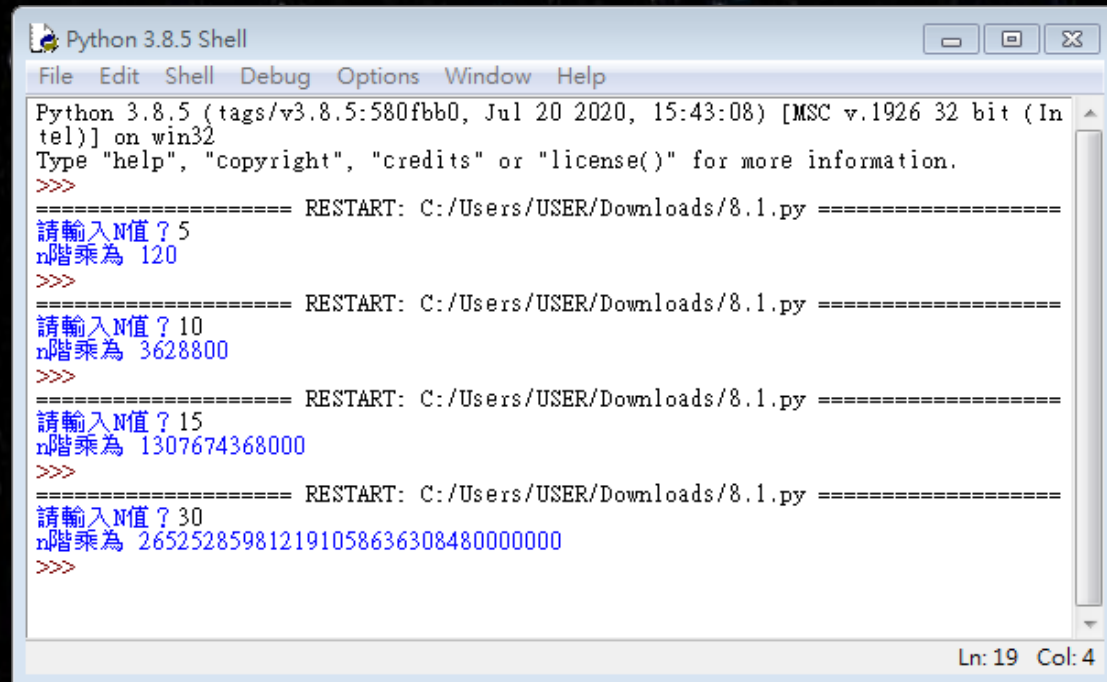
程式碼:

```
*8.py - C:/Users/USER/Downloads/8.py (3.8.5)*
File Edit Format Run Options Window Help
num=input('請輸入一個數字?')#請輸入一個數字
sum=0
for i in range(len(num)): #設定for迴圈 range為num的長度
    sum = sum + int(num[i])#計算num的數字全部相加
if sum % 3 == 0:#如果sum整除3則是3的倍數
    print(num,'是3的倍數')
else:#否則就不是3的倍數
    print(num,'不是3的倍數')
```

Ln: 7 Col: 15

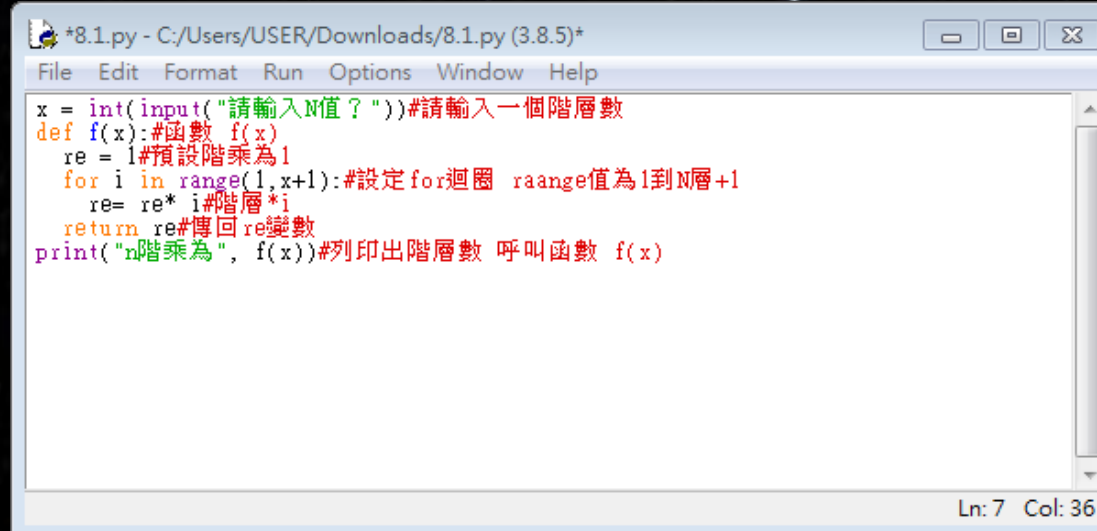
12. 求 n 階乘

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/USER/Downloads/8.1.py =====
請輸入N值? 5
n階乘為 120
>>>
===== RESTART: C:/Users/USER/Downloads/8.1.py =====
請輸入N值? 10
n階乘為 3628800
>>>
===== RESTART: C:/Users/USER/Downloads/8.1.py =====
請輸入N值? 15
n階乘為 1307674368000
>>>
===== RESTART: C:/Users/USER/Downloads/8.1.py =====
請輸入N值? 30
n階乘為 265252859812191058636308480000000
>>>
Ln: 19 Col: 4
```

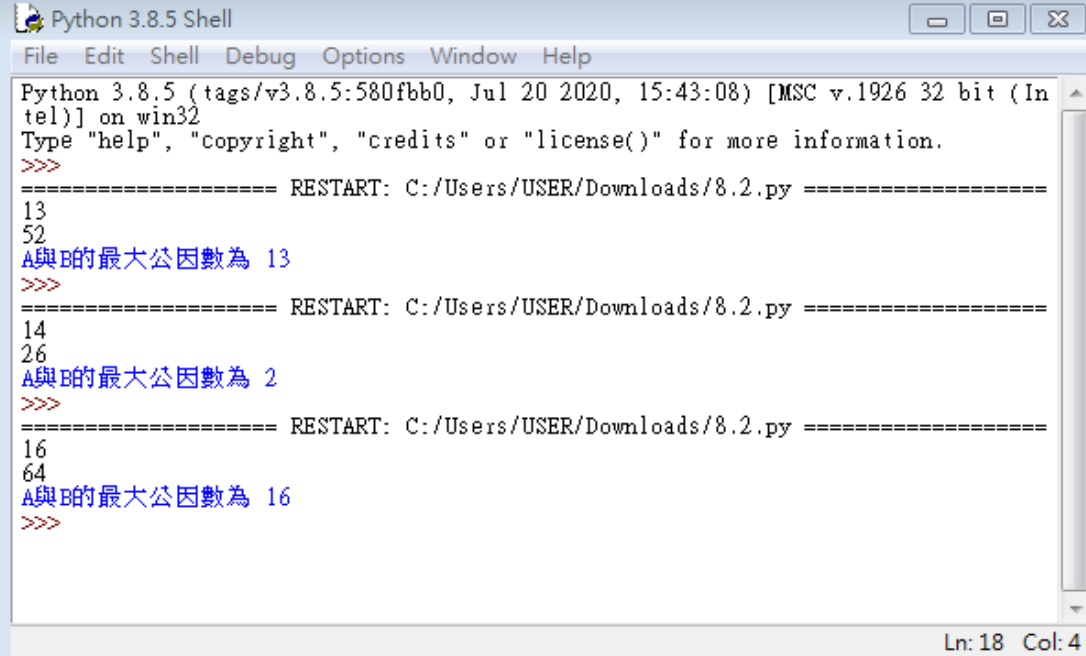
程式碼:



```
*8.1.py - C:/Users/USER/Downloads/8.1.py (3.8.5)*
File Edit Format Run Options Window Help
x = int(input("請輸入N值?"))#請輸入一個階層數
def f(x):#函數 f(x)
    re = 1#預設階乘為1
    for i in range(1,x+1):#設定for迴圈 raange值為1到N層+1
        re= re* i#階層*i
    return re#傳回re變數
print("n階乘為", f(x))#列印出階層數 呼叫函數 f(x)
Ln: 7 Col: 36
```

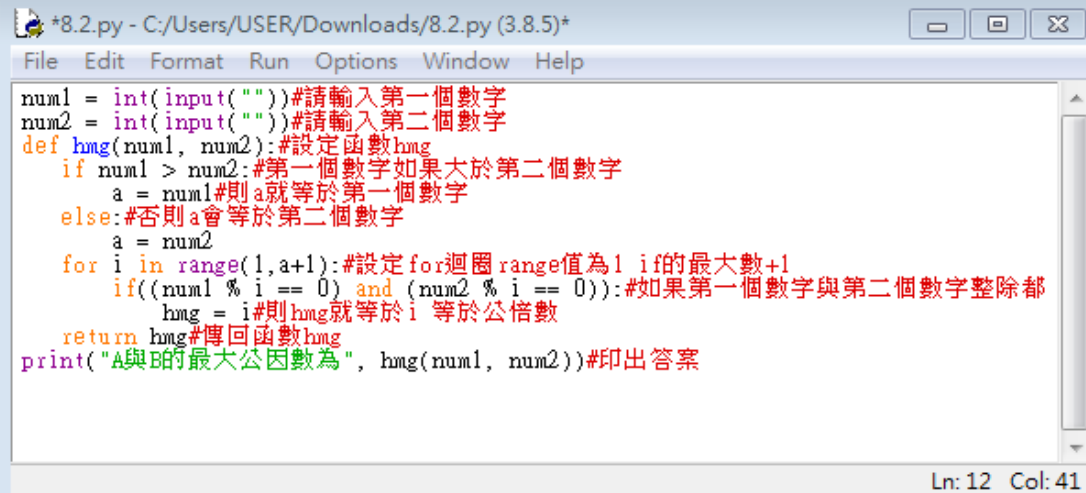
13. 求兩數的最大公因數

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/USER/Downloads/8.2.py =====
13
52
A與B的最大公因數為 13
>>>
===== RESTART: C:/Users/USER/Downloads/8.2.py =====
14
26
A與B的最大公因數為 2
>>>
===== RESTART: C:/Users/USER/Downloads/8.2.py =====
16
64
A與B的最大公因數為 16
>>>
Ln: 18 Col: 4
```

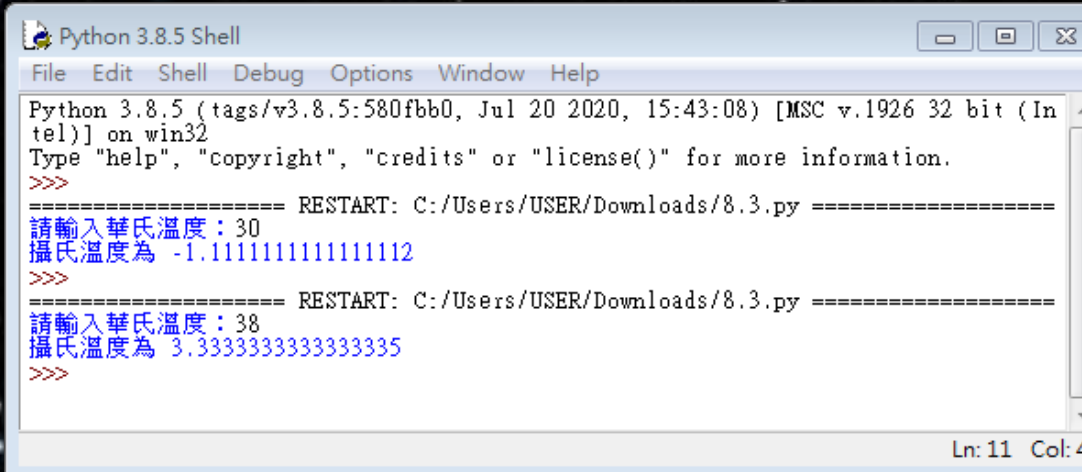
程式碼:



```
*8.2.py - C:/Users/USER/Downloads/8.2.py (3.8.5)*
File Edit Format Run Options Window Help
num1 = int(input(""))#請輸入第一個數字
num2 = int(input(""))#請輸入第二個數字
def hmg(num1, num2):#設定函數hmg
    if num1 > num2:#第一個數字如果大於第二個數字
        a = num1#則a就等於第一個數字
    else:#否則a會等於第二個數字
        a = num2
    for i in range(1, a+1):#設定for迴圈range值為1 if的最大數+1
        if((num1 % i == 0) and (num2 % i == 0)):#如果第一個數字與第二個數字整除都
            hmg = i#則hmg就等於i 等於公倍數
    return hmg#傳回函數hmg
print("A與B的最大公因數為", hmg(num1, num2))#印出答案
Ln: 12 Col: 41
```

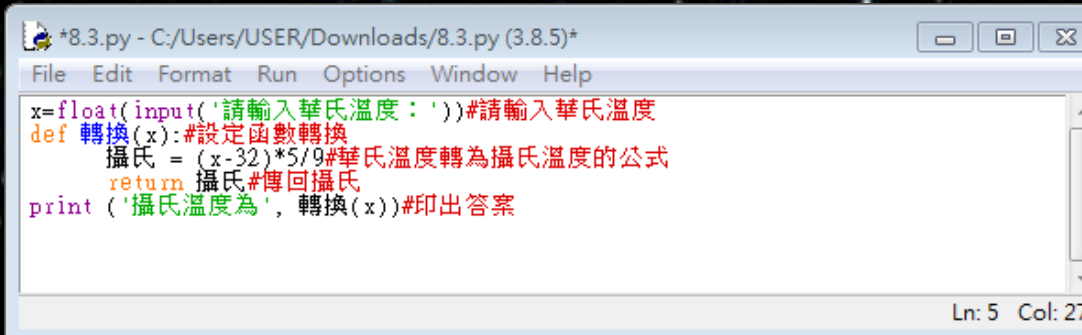
14. 華氏轉攝氏

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/USER/Downloads/8.3.py =====
請輸入華氏溫度：30
攝氏溫度為 -1.1111111111111112
>>>
===== RESTART: C:/Users/USER/Downloads/8.3.py =====
請輸入華氏溫度：38
攝氏溫度為 3.3333333333333335
>>>
Ln: 11 Col: 4
```

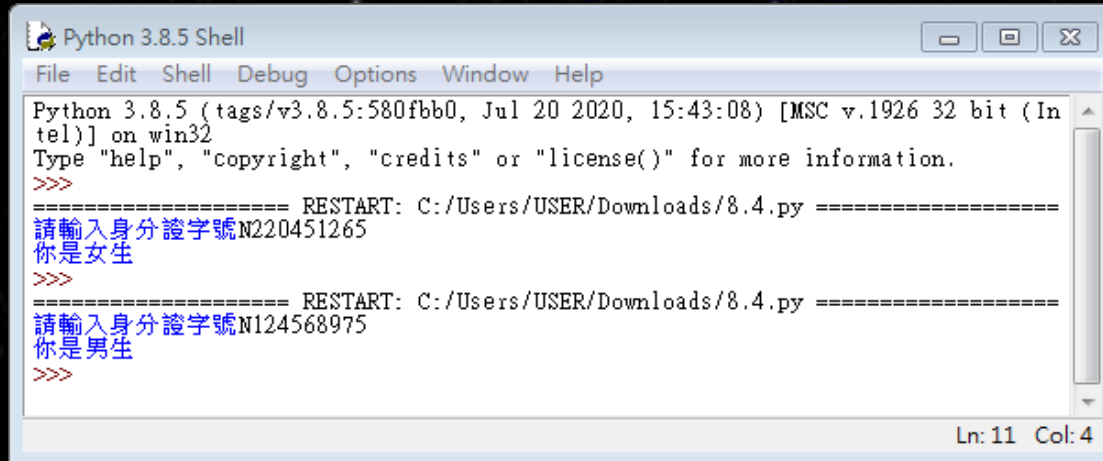
程式碼:



```
*8.3.py - C:/Users/USER/Downloads/8.3.py (3.8.5)*
File Edit Format Run Options Window Help
x=float(input('請輸入華氏溫度：'))#請輸入華氏溫度
def 轉換(x):#設定函數轉換
    攝氏 = (x-32)*5/9#華氏溫度轉為攝氏溫度的公式
    return 攝氏#傳回攝氏
print ('攝氏溫度為', 轉換(x))#印出答案
Ln: 5 Col: 27
```

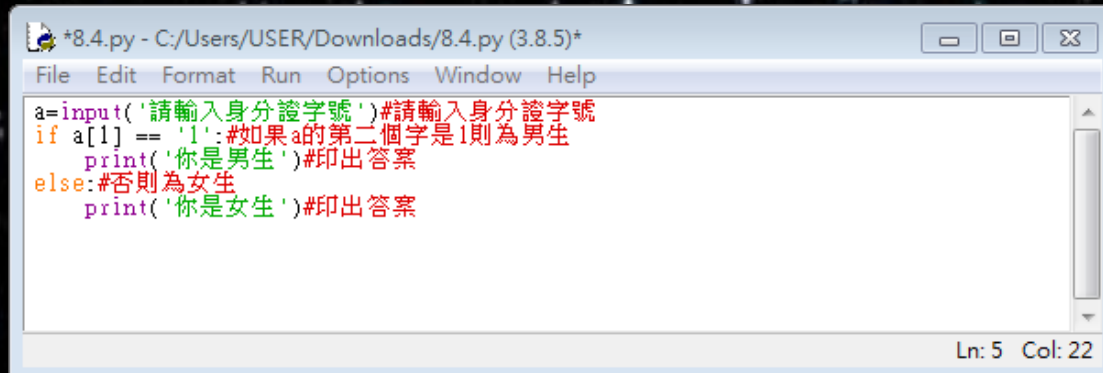

15. 身分證字號判斷男女

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/USER/Downloads/8.4.py =====
請輸入身分證字號N220451265
你是女生
>>>
===== RESTART: C:/Users/USER/Downloads/8.4.py =====
請輸入身分證字號N124568975
你是男生
>>>
Ln: 11 Col: 4
```

程式碼:



```
*8.4.py - C:/Users/USER/Downloads/8.4.py (3.8.5)*
File Edit Format Run Options Window Help
a=input('請輸入身分證字號')#請輸入身分證字號
if a[1] == '1':#如果a的第二個字是1則為男生
    print('你是男生')#印出答案
else:#否則為女生
    print('你是女生')#印出答案
Ln: 5 Col: 22
```

16. .五個函式

執行結果:

```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ===
12
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ===
5
['5']
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ===
請輸入字串4567
尋找取代的4
要取代為5
5567
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ===
輸入字串55210
要找的字串55
要計算的字串21
0
1
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ===
輸入英文字串apple
APPLE
apple
>>>
```

程式碼:

```
*123.py - C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ...
File Edit Format Run Options Window Help
s='abcd1234我是天才'#請輸入物件s
print(len(s))#回傳物件s的長度

a=input('#請輸入字串')
print(a.split(',')#回傳切割後的串列

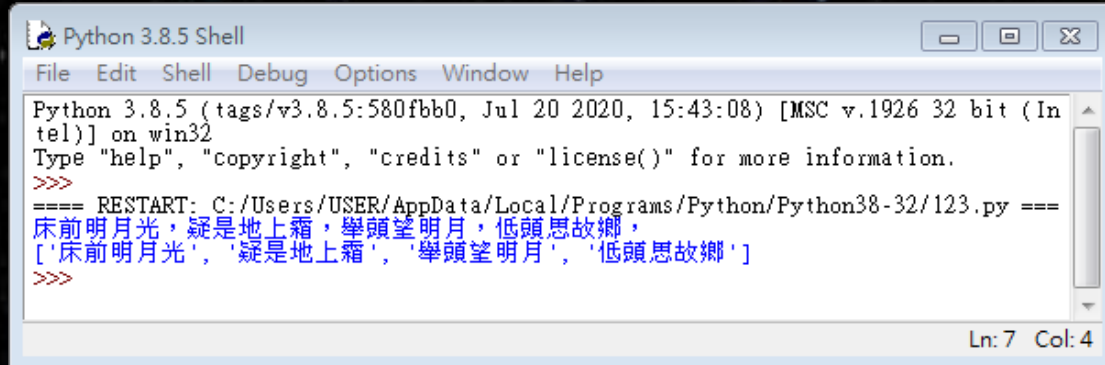
a=input('請輸入字串')#請輸入字串
b=input('尋找取代的')#請輸入要尋找取代的
c=input('要取代為')#請輸入要取代為
print(a.replace(b,c))#原始字串以取代字串取代 回傳取代後的字串

a=input('輸入字串')#請輸入字串
b=input('要找的字串')#請輸入要找的字串
c=input('要計算的字串')#請輸入要計算的字串
print(a.find(b))#回傳要找的字串的位置
print(a.count(c))#回傳要找的字串出現的次數

s=input('輸入英文字串')#請輸入英文字串
print(s.upper())#回傳轉成大寫的英文字串
print(s.lower())#回傳轉成小寫的英文字串
```

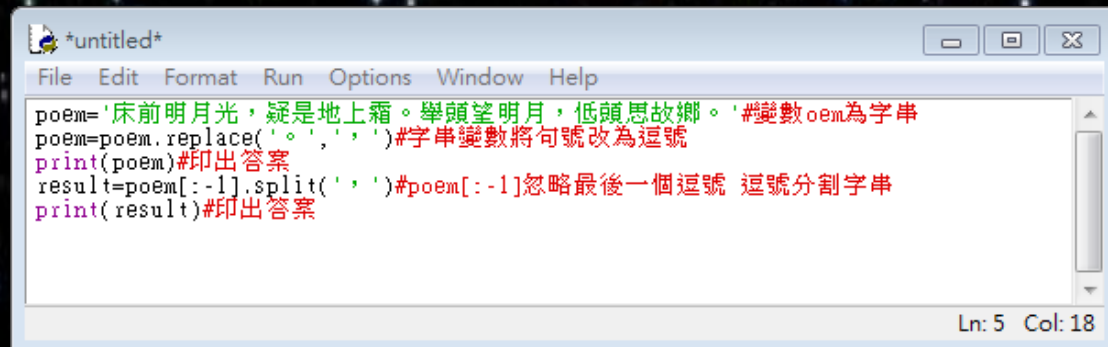
17. 取出詩中的每一個句子

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ====
床前明月光，疑是地上霜，舉頭望明月，低頭思故鄉，
['床前明月光', '疑是地上霜', '舉頭望明月', '低頭思故鄉']
>>>
```

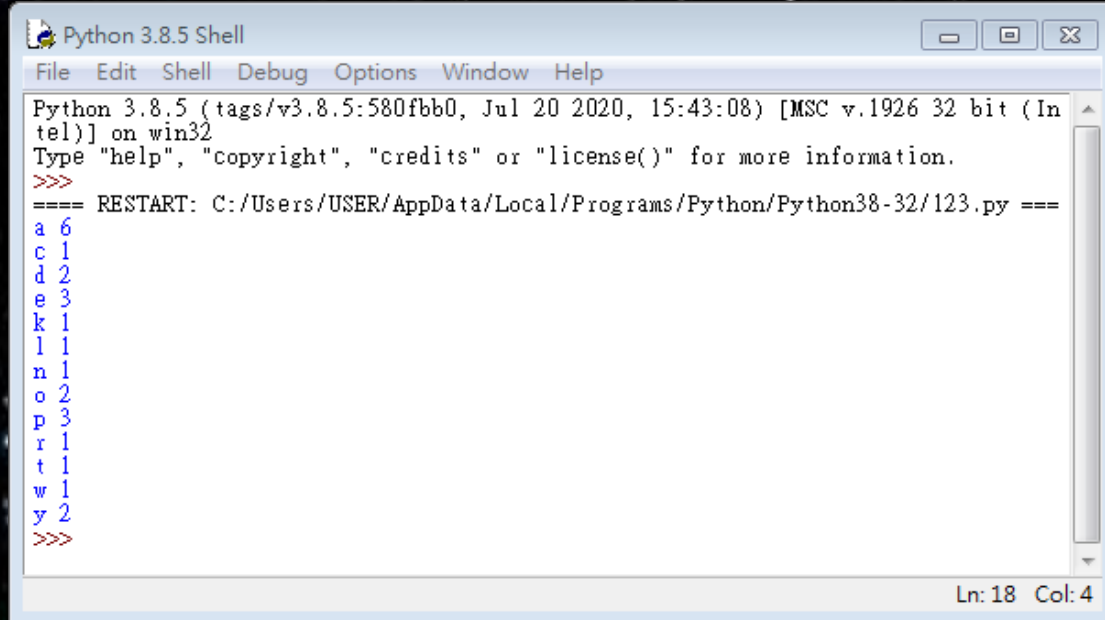
程式碼:



```
*untitled*
File Edit Format Run Options Window Help
poem='床前明月光，疑是地上霜。舉頭望明月，低頭思故鄉。'#變數oem為字串
poem=poem.replace('。',';')#字串變數將句號改為逗號
print(poem)#印出答案
result=poem[:-1].split(';')#poem[:-1]忽略最後一個逗號 逗號分割字串
print(result)#印出答案
```

18. 計算英文字母個數

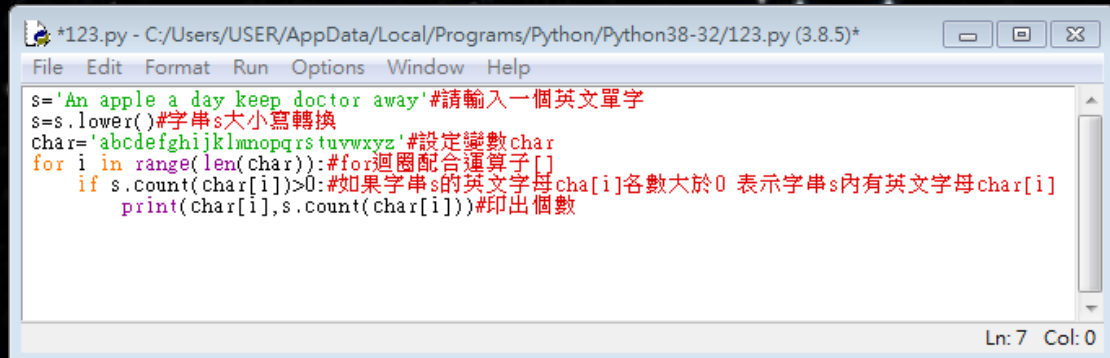
執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ====
a 6
c 1
d 2
e 3
k 1
l 1
n 1
o 2
p 3
r 1
t 1
w 1
y 2
>>>
```

Ln: 18 Col: 4

程式碼:

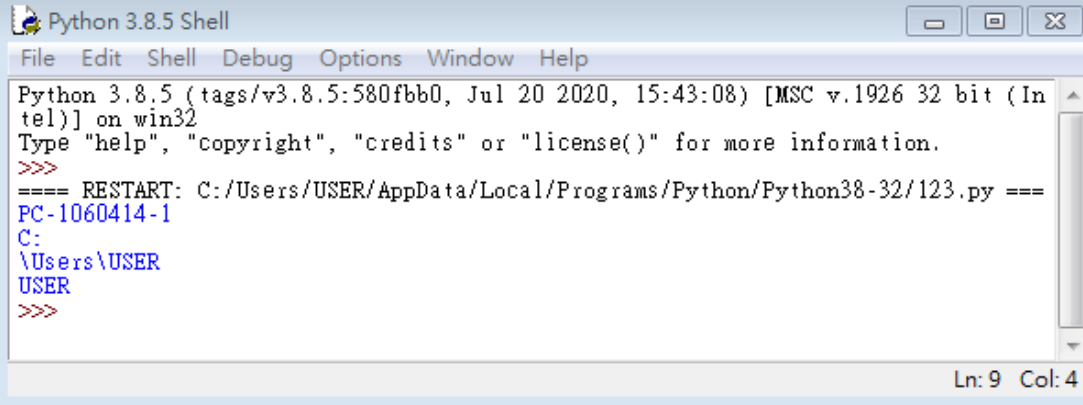


```
*123.py - C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py (3.8.5)*
File Edit Format Run Options Window Help
s='An apple a day keep doctor away'#請輸入一個英文單字
s=s.lower()#字串s大小寫轉換
char='abcdefghijklmnopqrstuvwxyz'#設定變數char
for i in range(len(char)):#for迴圈配合運算子[]
    if s.count(char[i])>0:#如果字串s的英文字母char[i]各數大於0 表示字串s內有英文字母char[i]
        print(char[i],s.count(char[i]))#印出個數
```

Ln: 7 Col: 0

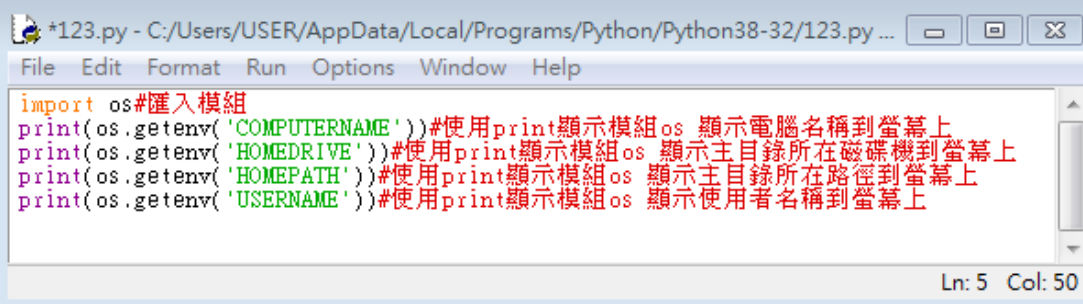
19. 顯示環境變數

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ====
PC-1060414-1
C:
\Users\USER
USER
>>>
Ln: 9 Col: 4
```

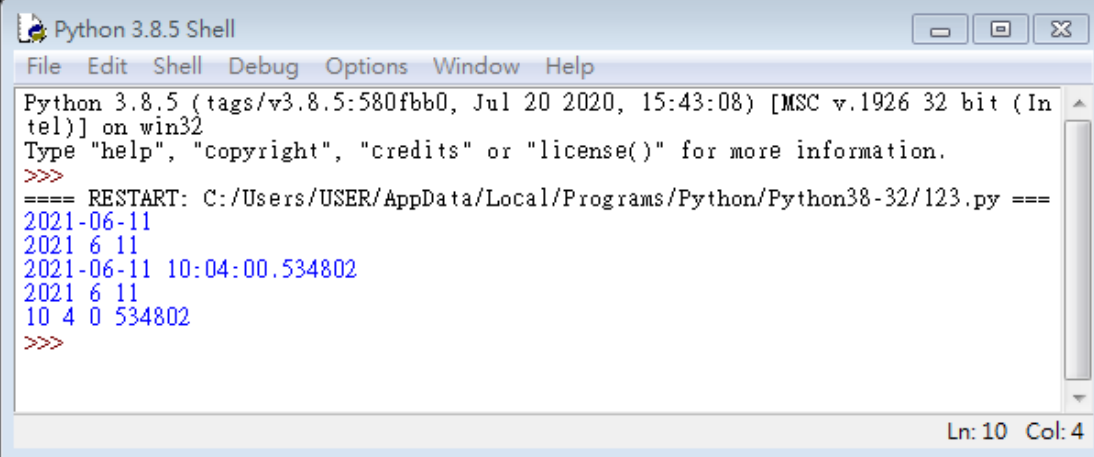
程式碼:



```
*123.py - C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ...
File Edit Format Run Options Window Help
import os#匯入模組
print(os.getenv('COMPUTERNAME'))#使用print顯示模組os 顯示電腦名稱到螢幕上
print(os.getenv('HOMEDRIVE'))#使用print顯示模組os 顯示主目錄所在磁碟機到螢幕上
print(os.getenv('HOMEPATH'))#使用print顯示模組os 顯示主目錄所在路徑到螢幕上
print(os.getenv('USERNAME'))#使用print顯示模組os 顯示使用者名稱到螢幕上
Ln: 5 Col: 50
```

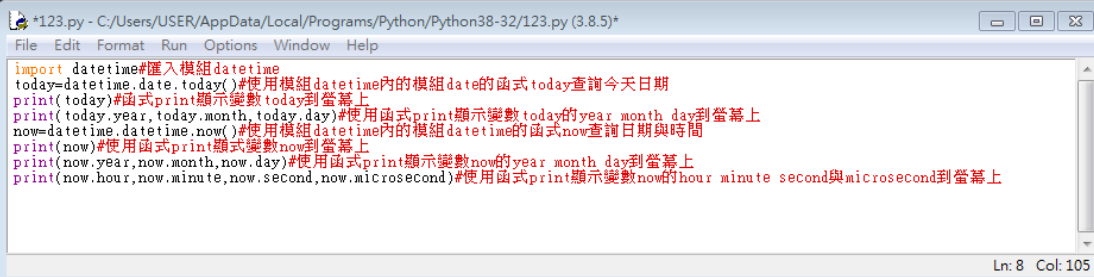
20. 顯示目前時間

執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ====
2021-06-11
2021 6 11
2021-06-11 10:04:00.534802
2021 6 11
10 4 0 534802
>>>
```

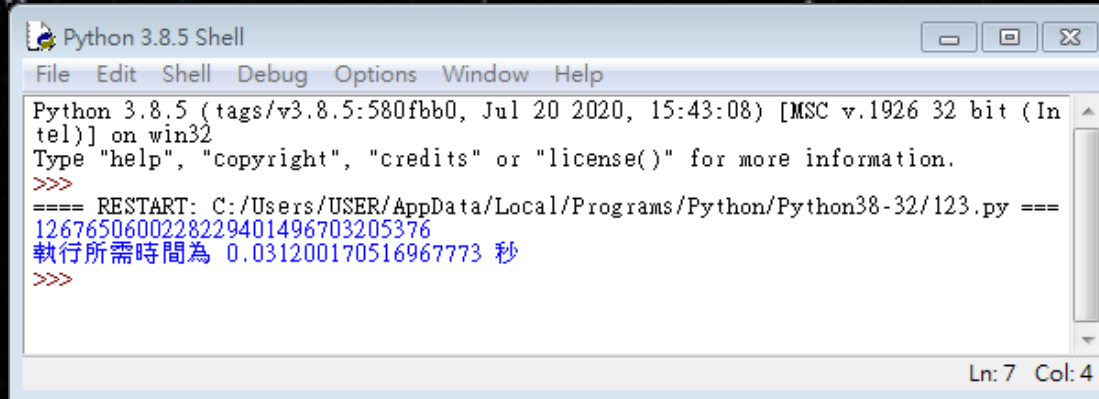
程式碼:



```
*123.py - C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py (3.8.5)*
File Edit Format Run Options Window Help
import datetime#匯入模組datetime
today=datetime.date.today()#使用模組datetime內的模組date的函式today查詢今天日期
print(today)#函式print顯示變數today到螢幕上
print(today.year,today.month,today.day)#使用函式print顯示變數today的year month day到螢幕上
now=datetime.datetime.now()#使用模組datetime內的模組datetime的函式now查詢日期與時間
print(now)#使用函式print顯示變數now到螢幕上
print(now.year,now.month,now.day)#使用函式print顯示變數now的year month day到螢幕上
print(now.hour,now.minute,now.second,now.microsecond)#使用函式print顯示變數now的hour minute second與microsecond到螢幕上
```

21. 計算程式執行時間

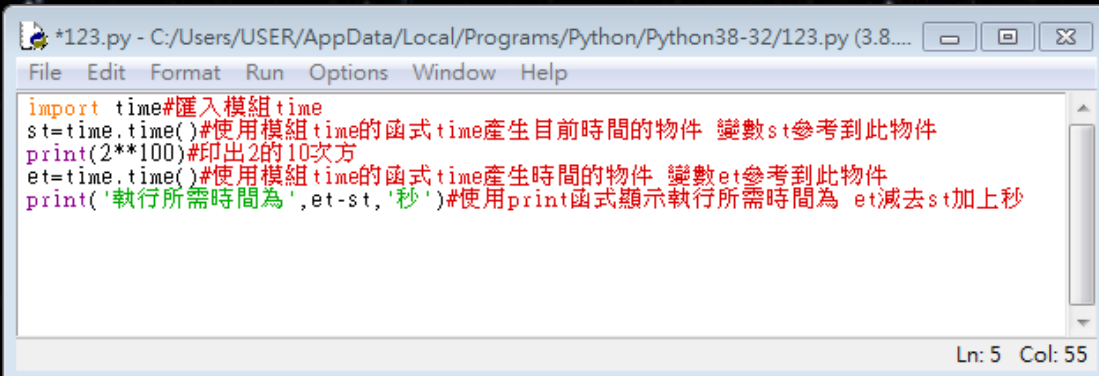
執行結果:



```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py ====
1267650600228229401496703205376
執行所需時間為 0.031200170516967773 秒
>>>
```

Ln: 7 Col: 4

程式碼:



```
*123.py - C:/Users/USER/AppData/Local/Programs/Python/Python38-32/123.py (3.8...
File Edit Format Run Options Window Help
import time#匯入模組time
st=time.time()#使用模組time的函式time產生目前時間的物件 變數st參考到此物件
print(2**100)#印出2的10次方
et=time.time()#使用模組time的函式time產生時間的物件 變數et參考到此物件
print('執行所需時間為',et-st,'秒')#使用print函式顯示執行所需時間為 et減去st加上秒
```

Ln: 5 Col: 55

22.計算三角函數

執行結果:

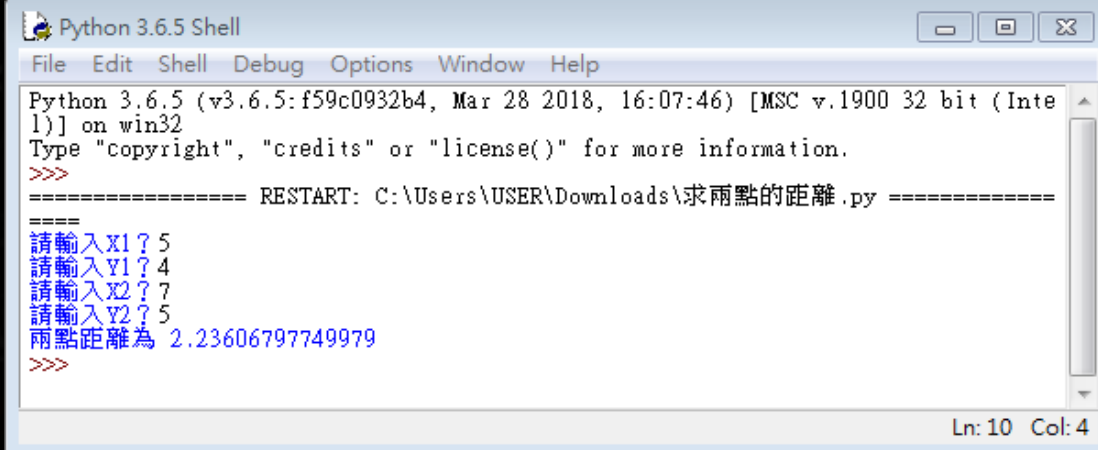
```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/USER/Downloads/123.py =====
請輸入角度150
Sin值為 0.49999999999999994
Cos值為 -0.8660254037844387
Tan值為 -0.5773502691896257
>>>
Ln: 9 Col: 4
```

程式碼:

```
*123.py - C:/Users/USER/Downloads/123.py (3.6.5)*
File Edit Format Run Options Window Help
import math#匯入模組math
deg=float(input('請輸入角度'))#請輸入角度
r=deg/180*math.pi#轉換角度(變數deg)到弧度
print('Sin值為', math.sin(r))#計算弧度r的Sin值
print('Cos值為', math.cos(r))#計算弧度r的Cos值
print('Tan值為', math.tan(r))#計算弧度r的Tan值
Ln: 6 Col: 38
```

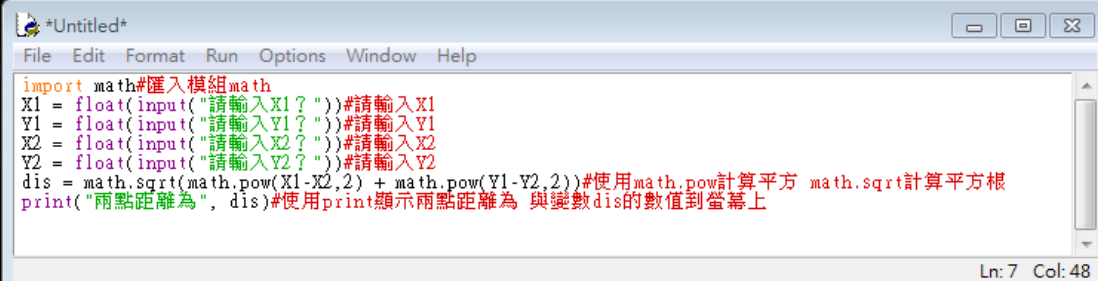

23. 求兩點的距離

執行結果:



```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\USER\Downloads\求兩點的距離.py =====
====
請輸入X1? 5
請輸入Y1? 4
請輸入X2? 7
請輸入Y2? 5
兩點距離為 2.23606797749979
>>>
```

程式碼:



```
+Untitled+
File Edit Format Run Options Window Help
import math#匯入模組math
X1 = float(input("請輸入X1? "))#請輸入X1
Y1 = float(input("請輸入Y1? "))#請輸入Y1
X2 = float(input("請輸入X2? "))#請輸入X2
Y2 = float(input("請輸入Y2? "))#請輸入Y2
dis = math.sqrt(math.pow(X1-X2,2) + math.pow(Y1-Y2,2))#使用math.pow計算平方 math.sqrt計算平方根
print("兩點距離為", dis)#使用print顯示兩點距離為 與變數dis的數值到螢幕上
Ln: 7 Col: 48
```