

北斗家商

程式語言與設計報告

資一 1 8 許瑋軒

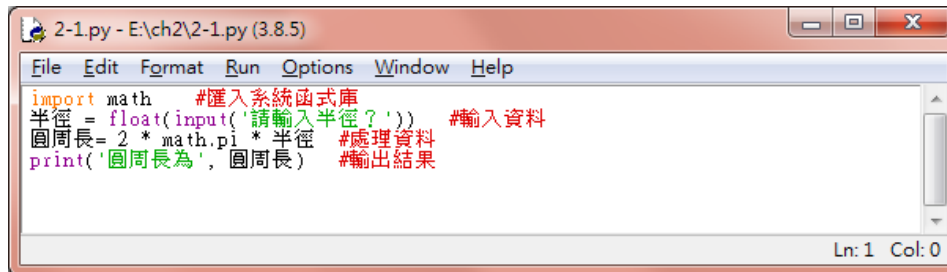
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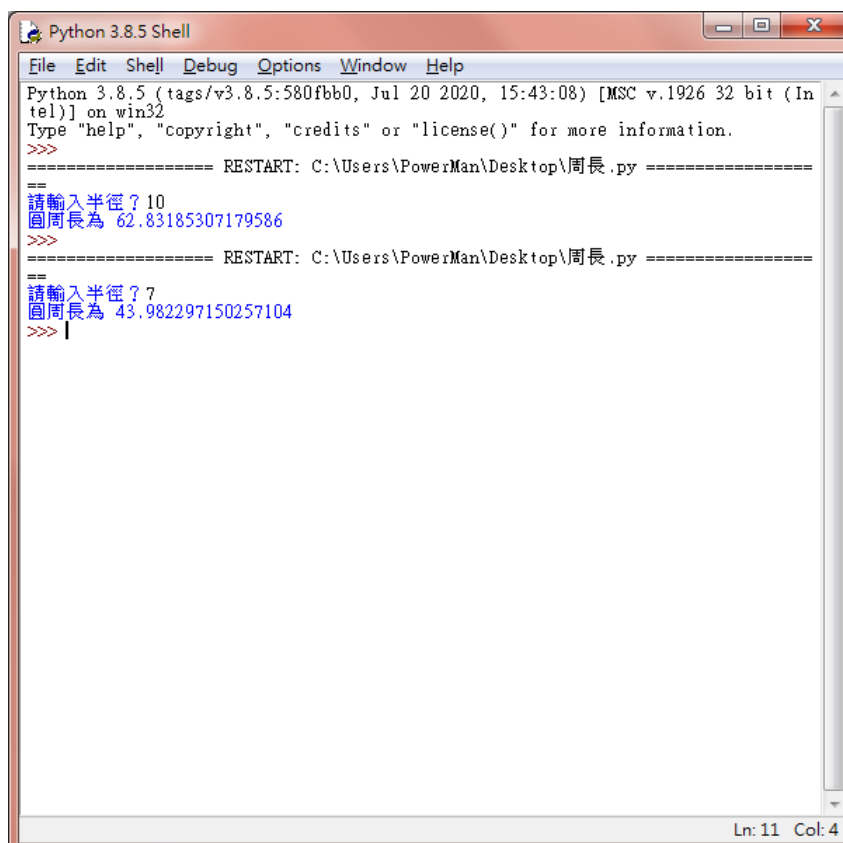
題目說明：計算圓周長

程式碼：



```
2-1.py - E:\ch2\2-1.py (3.8.5)
File Edit Format Run Options Window Help
import math #匯入系統函式庫
半徑 = float(input('請輸入半徑?')) #輸入資料
圓周長= 2 * math.pi * 半徑 #處理資料
print('圓周長為', 圓周長) #輸出結果
Ln: 1 Col: 0
```

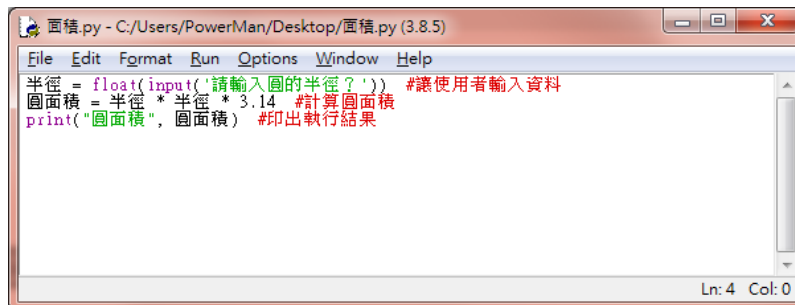
程式執行結果：



```
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\PowerMan\Desktop\周長.py =====
==
請輸入半徑? 10
圓周長為 62.83185307179586
>>>
===== RESTART: C:\Users\PowerMan\Desktop\周長.py =====
==
請輸入半徑? 7
圓周長為 43.982297150257104
>>> |
Ln: 11 Col: 4
```

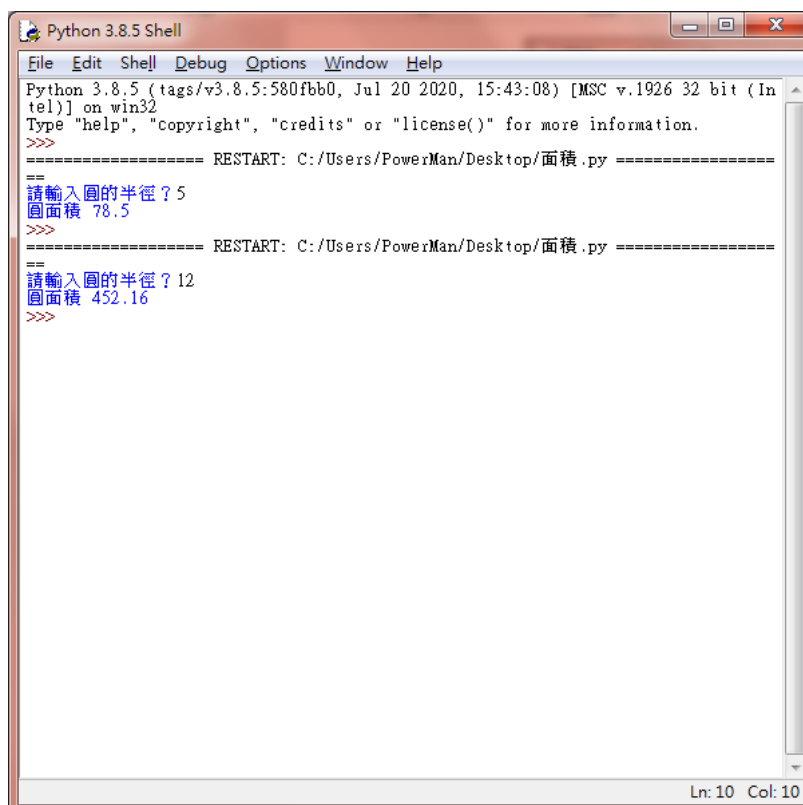
題目說明：計算圓面積

程式碼：



```
面積.py - C:/Users/PowerMan/Desktop/面積.py (3.8.5)
File Edit Format Run Options Window Help
半徑 = float(input('請輸入圓的半徑？')) #讓使用者輸入資料
圓面積 = 半徑 * 半徑 * 3.14 #計算圓面積
print("圓面積", 圓面積) #印出執行結果
Ln: 4 Col: 0
```

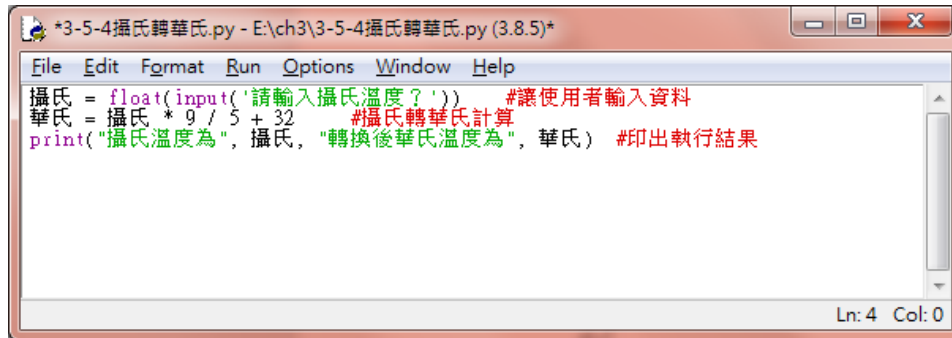
程式執行結果：



```
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/PowerMan/Desktop/面積.py =====
==
請輸入圓的半徑？5
圓面積 78.5
>>>
===== RESTART: C:/Users/PowerMan/Desktop/面積.py =====
==
請輸入圓的半徑？12
圓面積 452.16
>>>
Ln: 10 Col: 10
```

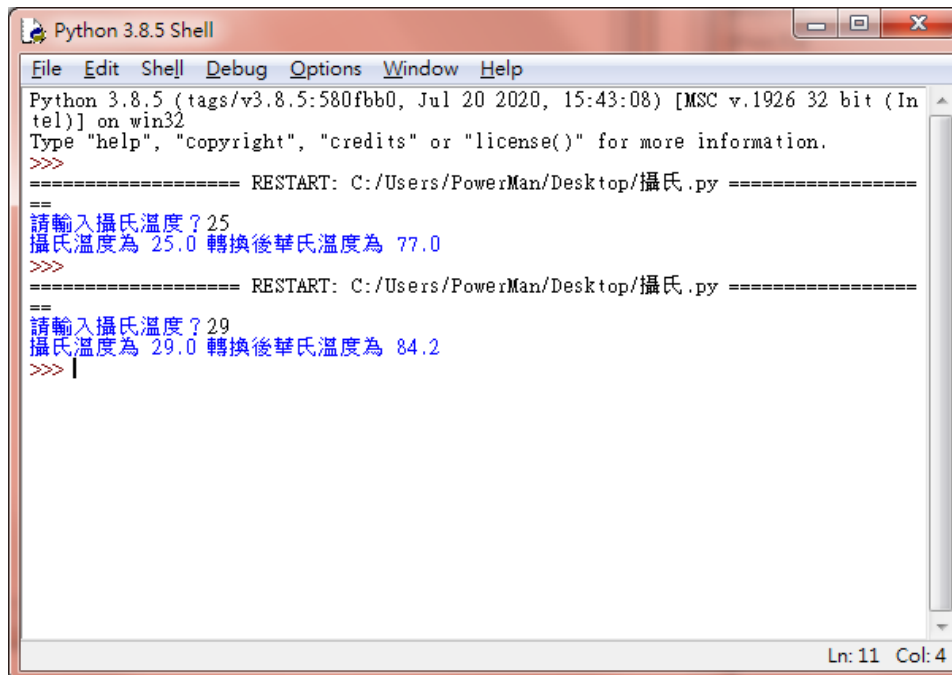
題目說明：攝氏華氏轉換

程式碼：



```
*3-5-4攝氏轉華氏.py - E:\ch3\3-5-4攝氏轉華氏.py (3.8.5)*
File Edit Format Run Options Window Help
攝氏 = float(input('請輸入攝氏溫度?')) #讓使用者輸入資料
華氏 = 攝氏 * 9 / 5 + 32 #攝氏轉華氏計算
print("攝氏溫度為", 攝氏, "轉換後華氏溫度為", 華氏) #印出執行結果
Ln: 4 Col: 0
```

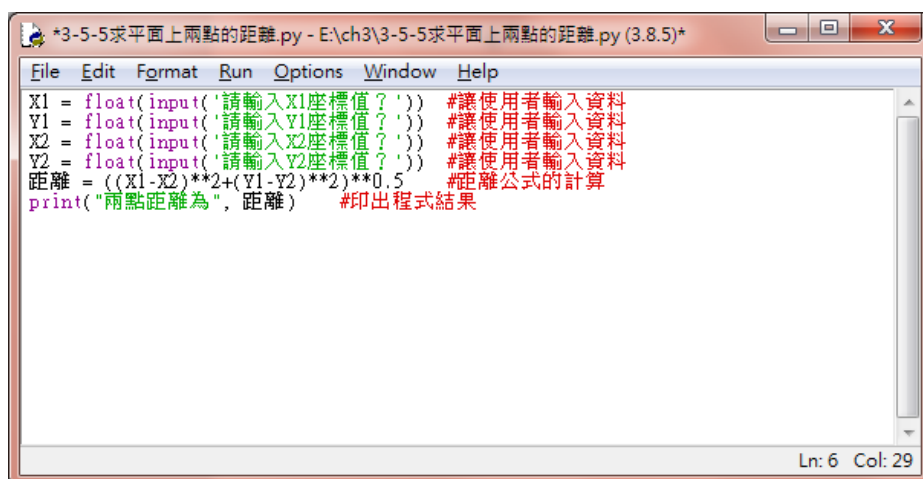
程式執行結果：



```
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/PowerMan/Desktop/攝氏.py =====
==
請輸入攝氏溫度? 25
攝氏溫度為 25.0 轉換後華氏溫度為 77.0
>>>
===== RESTART: C:/Users/PowerMan/Desktop/攝氏.py =====
==
請輸入攝氏溫度? 29
攝氏溫度為 29.0 轉換後華氏溫度為 84.2
>>> |
Ln: 11 Col: 4
```

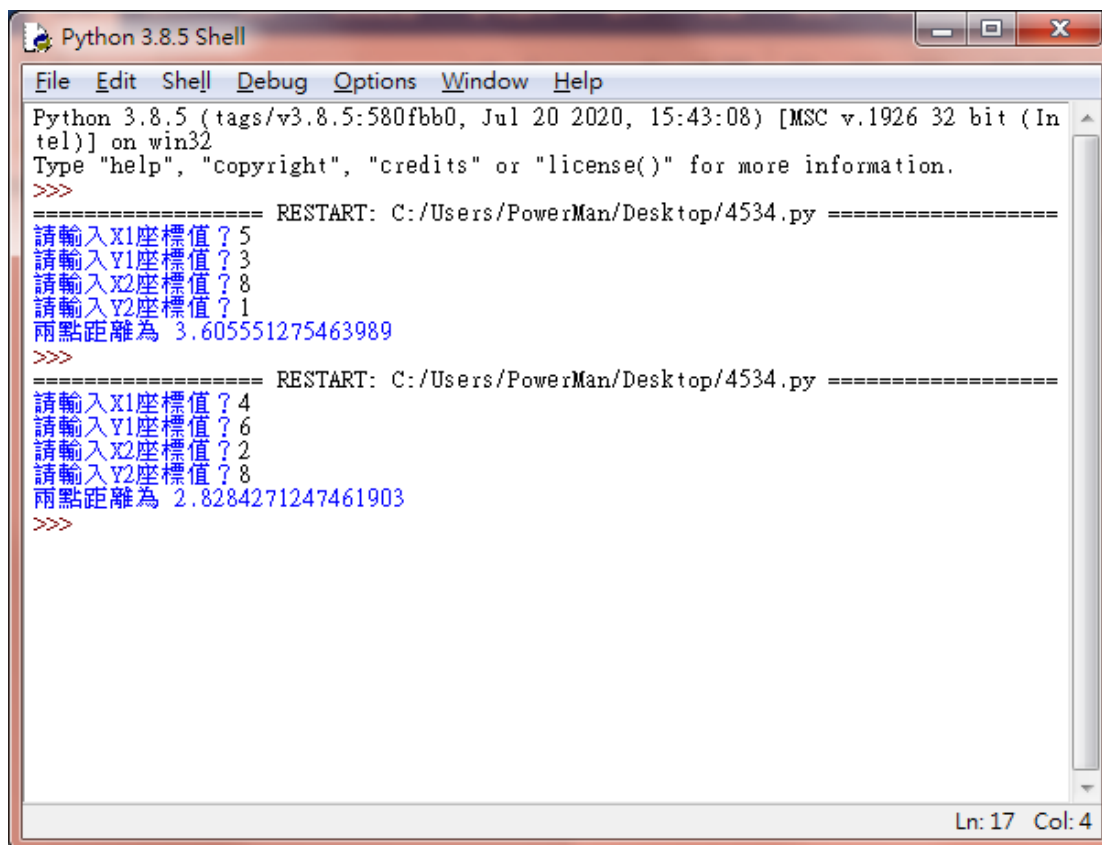
題目說明：計算兩點距離

程式碼：



```
*3-5-5求平面上兩點的距離.py - E:\ch3\3-5-5求平面上兩點的距離.py (3.8.5)*
File Edit Format Run Options Window Help
X1 = float(input('請輸入X1座標值?')) #讓使用者輸入資料
Y1 = float(input('請輸入Y1座標值?')) #讓使用者輸入資料
X2 = float(input('請輸入X2座標值?')) #讓使用者輸入資料
Y2 = float(input('請輸入Y2座標值?')) #讓使用者輸入資料
距離 = ((X1-X2)**2+(Y1-Y2)**2)**0.5 #距離公式的計算
print("兩點距離為", 距離) #印出程式結果
Ln: 6 Col: 29
```

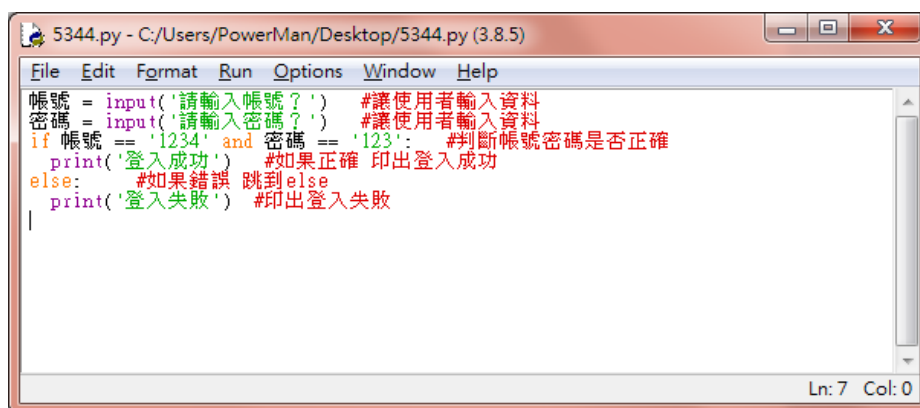
程式執行結果：



```
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/PowerMan/Desktop/4534.py =====
請輸入X1座標值? 5
請輸入Y1座標值? 3
請輸入X2座標值? 8
請輸入Y2座標值? 1
兩點距離為 3.605551275463989
>>>
===== RESTART: C:/Users/PowerMan/Desktop/4534.py =====
請輸入X1座標值? 4
請輸入Y1座標值? 6
請輸入X2座標值? 2
請輸入Y2座標值? 8
兩點距離為 2.8284271247461903
>>>
Ln: 17 Col: 4
```

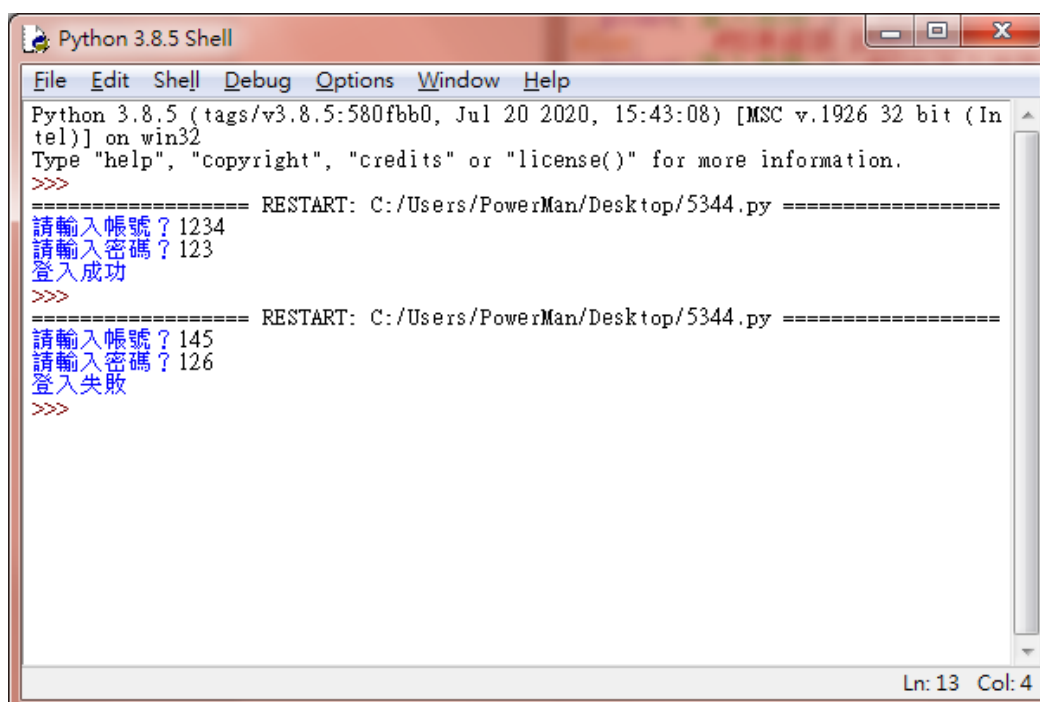
題目說明：登入帳號密碼驗證

程式碼：



```
5344.py - C:/Users/PowerMan/Desktop/5344.py (3.8.5)
File Edit Format Run Options Window Help
帳號 = input('請輸入帳號?') #讓使用者輸入資料
密碼 = input('請輸入密碼?') #讓使用者輸入資料
if 帳號 == '1234' and 密碼 == '123': #判斷帳號密碼是否正確
    print('登入成功') #如果正確 印出登入成功
else: #如果錯誤 跳到else
    print('登入失敗') #印出登入失敗
|
Ln: 7 Col: 0
```

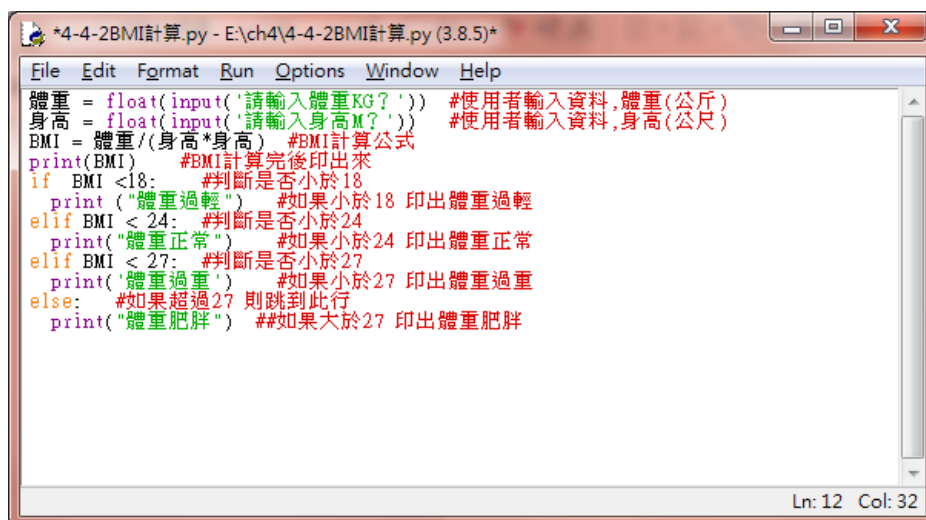
程式執行結果：



```
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/PowerMan/Desktop/5344.py =====
請輸入帳號? 1234
請輸入密碼? 123
登入成功
>>>
===== RESTART: C:/Users/PowerMan/Desktop/5344.py =====
請輸入帳號? 145
請輸入密碼? 126
登入失敗
>>>
Ln: 13 Col: 4
```

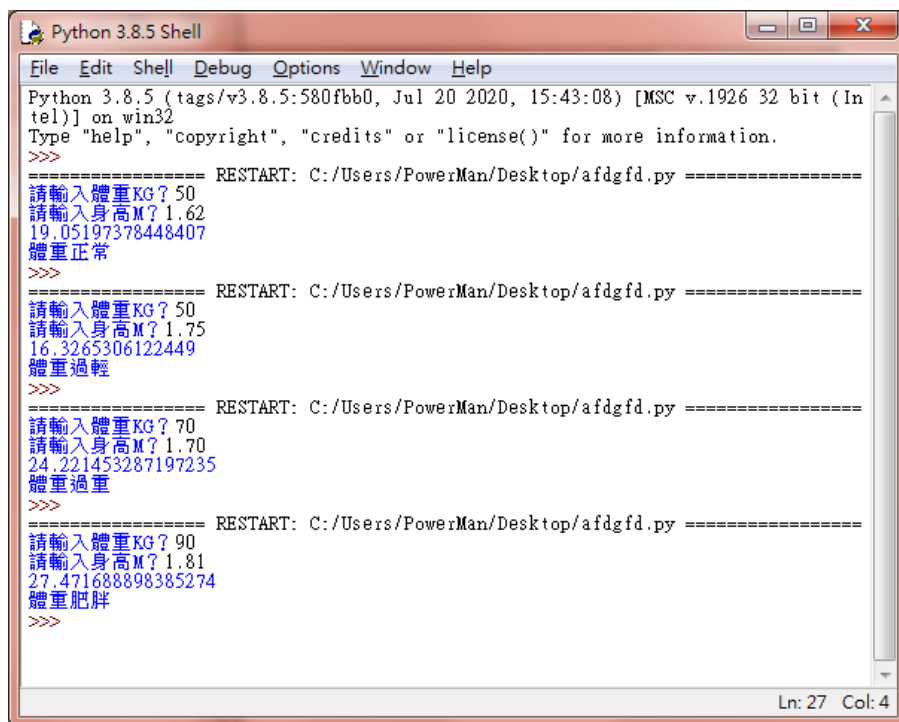

題目說明：計算 BMI

程式碼：



```
*4-4-2BMI計算.py - E:\ch4\4-4-2BMI計算.py (3.8.5)*
File Edit Format Run Options Window Help
體重 = float(input('請輸入體重KG? ')) #使用者輸入資料,體重(公斤)
身高 = float(input('請輸入身高M? ')) #使用者輸入資料,身高(公尺)
BMI = 體重/(身高*身高) #BMI計算公式
print(BMI) #BMI計算完後印出來
if BMI <18: #判斷是否小於18
    print("體重過輕") #如果小於18 印出體重過輕
elif BMI < 24: #判斷是否小於24
    print("體重正常") #如果小於24 印出體重正常
elif BMI < 27: #判斷是否小於27
    print("體重過重") #如果小於27 印出體重過重
else: #如果超過27 則跳到此行
    print("體重肥胖") ##如果大於27 印出體重肥胖
Ln: 12 Col: 32
```

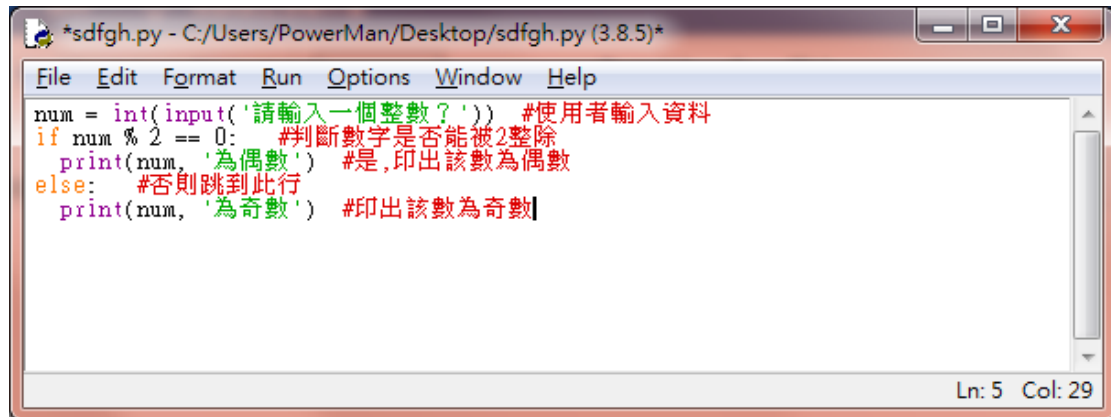
程式執行結果：



```
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/PowerMan/Desktop/afdgfd.py =====
請輸入體重KG? 50
請輸入身高M? 1.62
19.05197378448407
體重正常
>>>
===== RESTART: C:/Users/PowerMan/Desktop/afdgfd.py =====
請輸入體重KG? 50
請輸入身高M? 1.75
16.3265306122449
體重過輕
>>>
===== RESTART: C:/Users/PowerMan/Desktop/afdgfd.py =====
請輸入體重KG? 70
請輸入身高M? 1.70
24.221453287197235
體重過重
>>>
===== RESTART: C:/Users/PowerMan/Desktop/afdgfd.py =====
請輸入體重KG? 90
請輸入身高M? 1.81
27.471688898385274
體重肥胖
>>>
Ln: 27 Col: 4
```

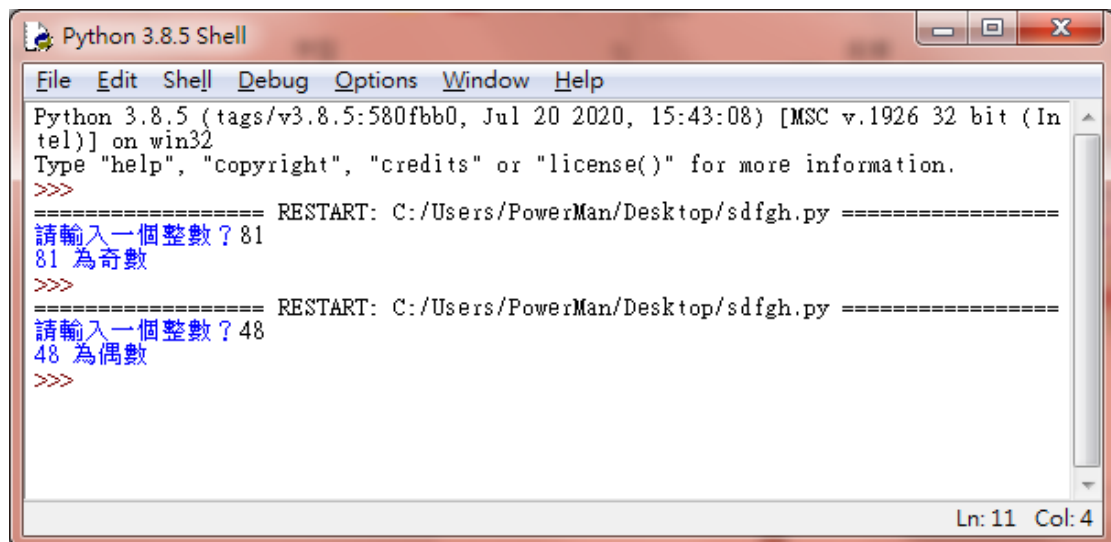
題目說明：判斷奇數偶數

程式碼：



```
*sdfgh.py - C:/Users/PowerMan/Desktop/sdfgh.py (3.8.5)*
File Edit Format Run Options Window Help
num = int(input('請輸入一個整數?')) #使用者輸入資料
if num % 2 == 0: #判斷數字是否能被2整除
    print(num, '為偶數') #是,印出該數為偶數
else: #否則跳到此行
    print(num, '為奇數') #印出該數為奇數
Ln: 5 Col: 29
```

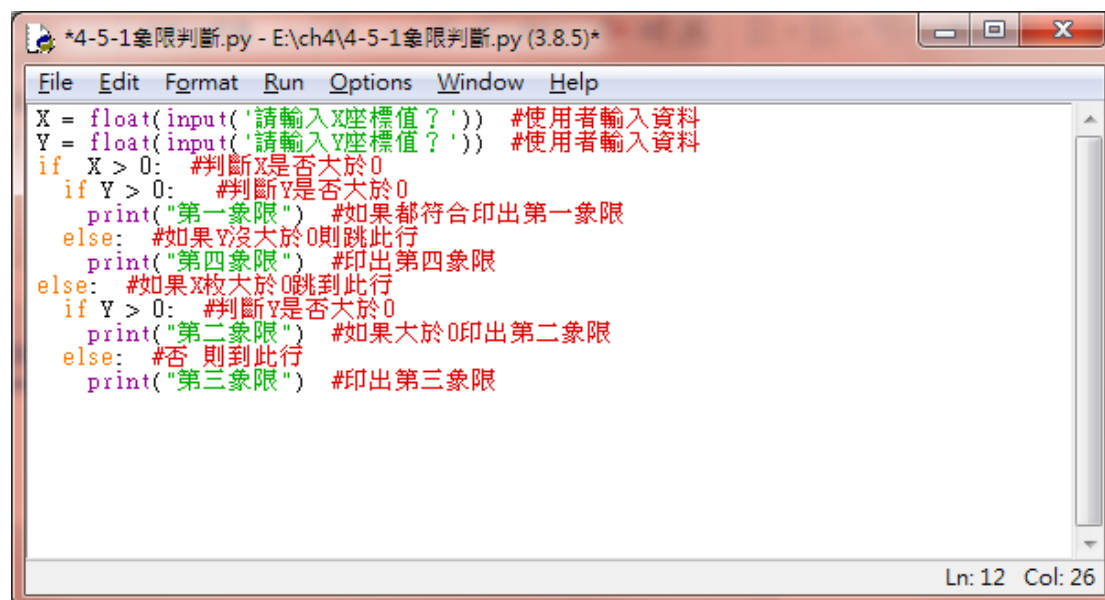
程式執行結果：



```
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/PowerMan/Desktop/sdfgh.py =====
請輸入一個整數? 81
81 為奇數
>>>
===== RESTART: C:/Users/PowerMan/Desktop/sdfgh.py =====
請輸入一個整數? 48
48 為偶數
>>>
Ln: 11 Col: 4
```

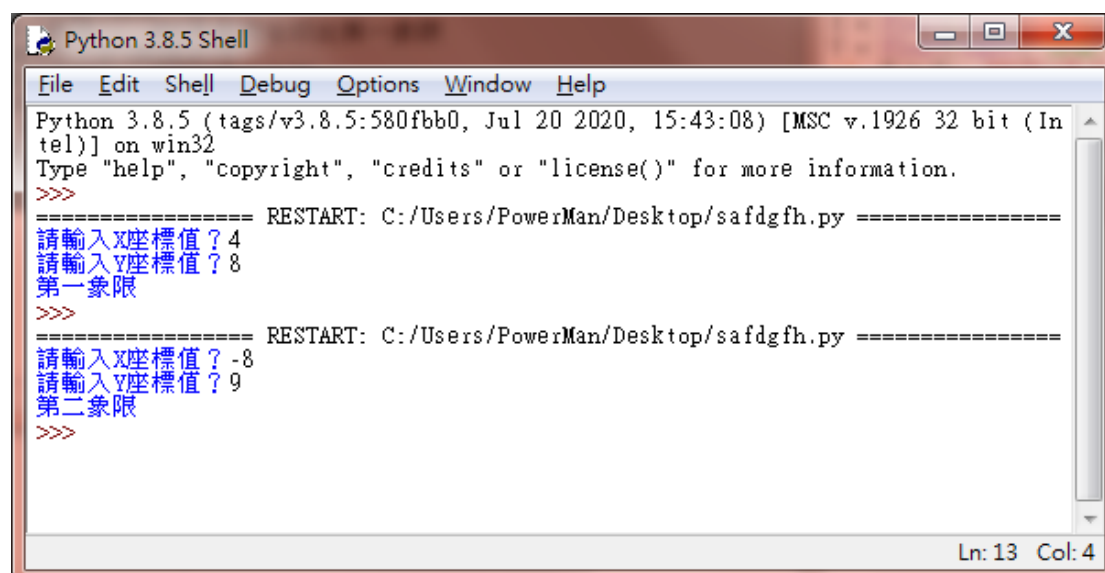
題目說明：判斷象限

程式碼：



```
*4-5-1象限判斷.py - E:\ch4\4-5-1象限判斷.py (3.8.5)*
File Edit Format Run Options Window Help
X = float(input('請輸入X座標值?')) #使用者輸入資料
Y = float(input('請輸入Y座標值?')) #使用者輸入資料
if X > 0: #判斷X是否大於0
    if Y > 0: #判斷Y是否大於0
        print("第一象限") #如果都符合印出第一象限
    else: #如果Y沒大於0則跳此行
        print("第四象限") #印出第四象限
else: #如果X沒大於0跳到此行
    if Y > 0: #判斷Y是否大於0
        print("第二象限") #如果大於0印出第二象限
    else: #否則到此行
        print("第三象限") #印出第三象限
Ln: 12 Col: 26
```

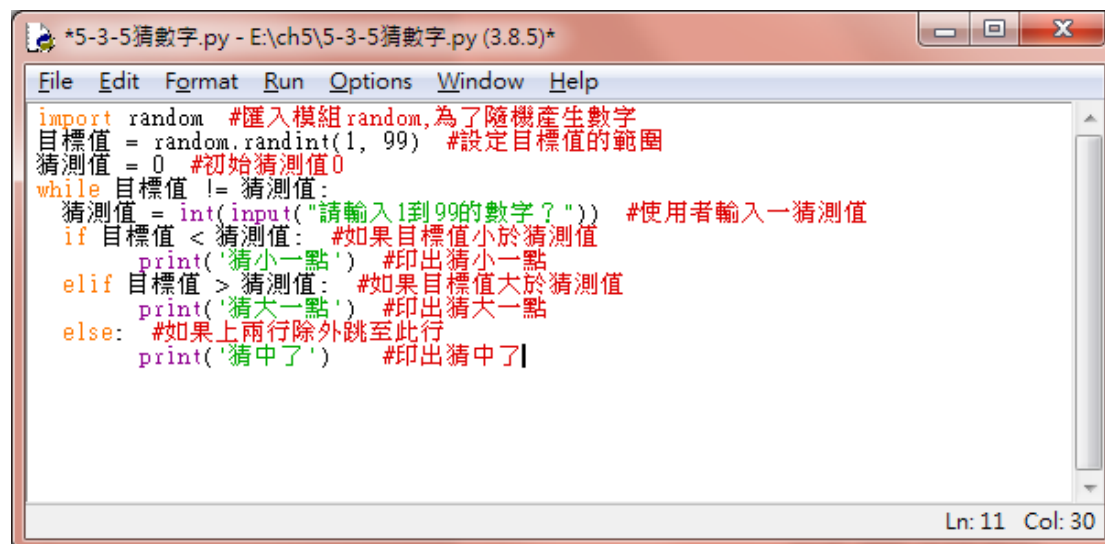
程式執行結果：



```
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/PowerMan/Desktop/safdgfh.py =====
請輸入X座標值? 4
請輸入Y座標值? 8
第一象限
>>>
===== RESTART: C:/Users/PowerMan/Desktop/safdgfh.py =====
請輸入X座標值? -8
請輸入Y座標值? 9
第二象限
>>>
Ln: 13 Col: 4
```

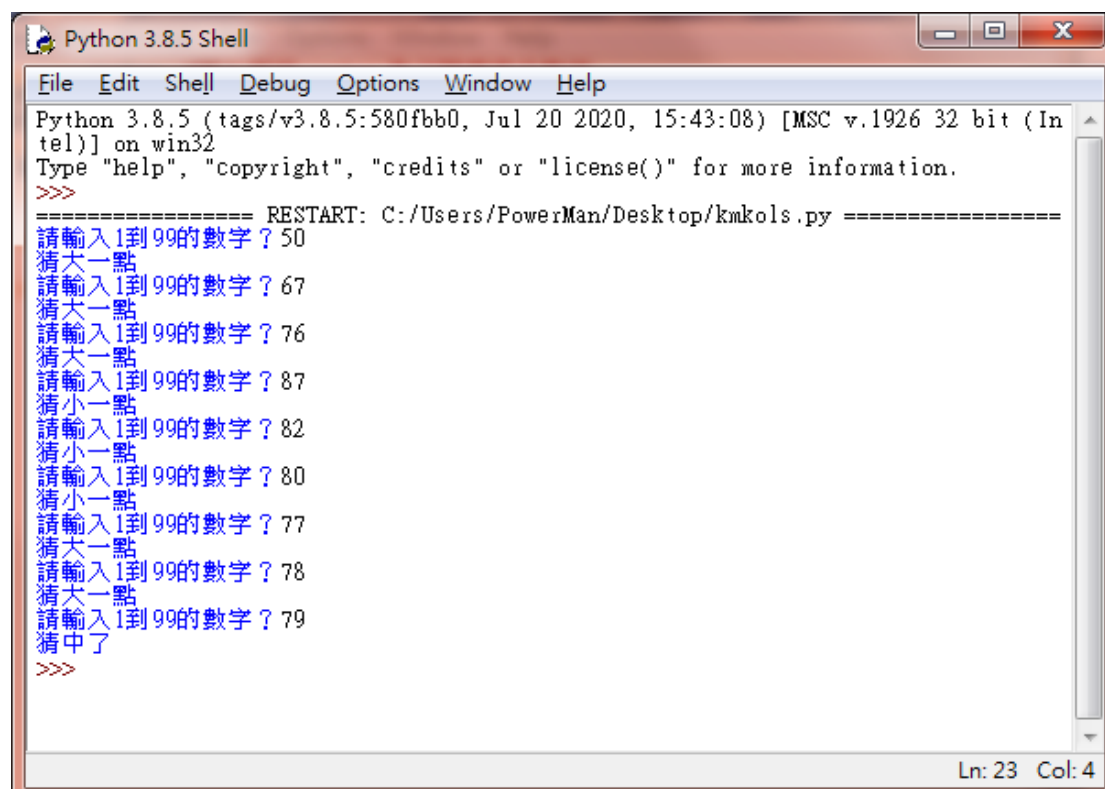
題目說明：猜數字

程式碼：



```
*5-3-5猜數字.py - E:\ch5\5-3-5猜數字.py (3.8.5)*
File Edit Format Run Options Window Help
import random #匯入模組random,為了隨機產生數字
目標值 = random.randint(1, 99) #設定目標值的範圍
猜測值 = 0 #初始猜測值0
while 目標值 != 猜測值:
    猜測值 = int(input("請輸入1到99的數字?")) #使用者輸入一猜測值
    if 目標值 < 猜測值: #如果目標值小於猜測值
        print('猜小一點') #印出猜小一點
    elif 目標值 > 猜測值: #如果目標值大於猜測值
        print('猜大一點') #印出猜大一點
    else: #如果上兩行除外跳至此行
        print('猜中了') #印出猜中了|
Ln: 11 Col: 30
```

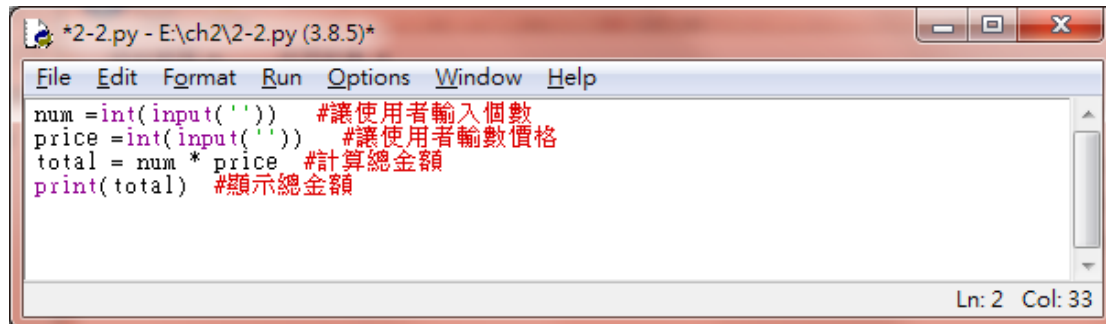
程式執行結果：



```
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/PowerMan/Desktop/kmkols.py =====
請輸入1到99的數字? 50
猜大一點
請輸入1到99的數字? 67
猜大一點
請輸入1到99的數字? 76
猜大一點
請輸入1到99的數字? 87
猜小一點
請輸入1到99的數字? 82
猜小一點
請輸入1到99的數字? 80
猜小一點
請輸入1到99的數字? 77
猜大一點
請輸入1到99的數字? 78
猜大一點
請輸入1到99的數字? 79
猜中了
>>>
Ln: 23 Col: 4
```

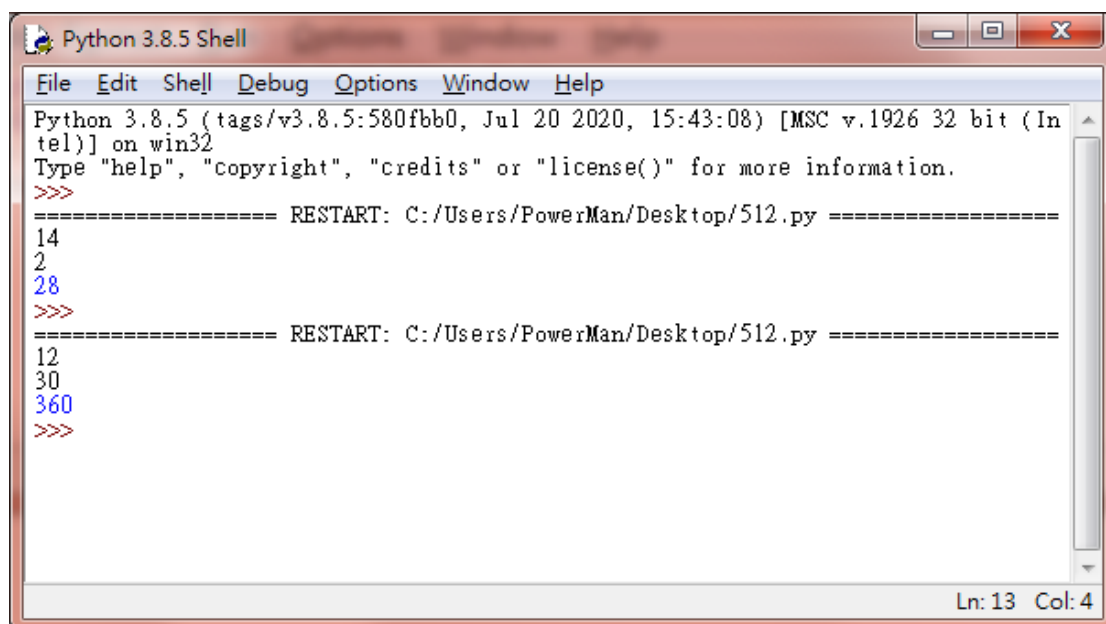
題目說明：計算總金額

程式碼：



```
*2-2.py - E:\ch2\2-2.py (3.8.5)*
File Edit Format Run Options Window Help
num =int(input('')) #讓使用者輸入個數
price =int(input('')) #讓使用者輸入價格
total = num * price #計算總金額
print(total) #顯示總金額
Ln: 2 Col: 33
```

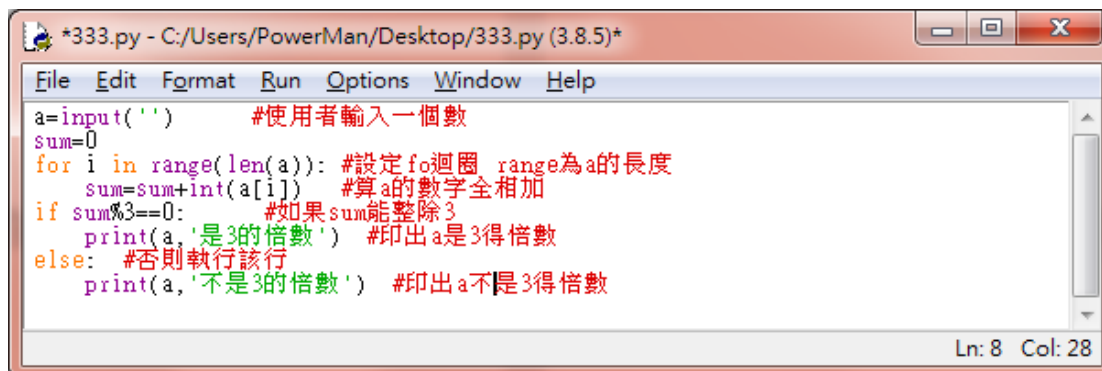
程式執行結果：



```
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 (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/PowerMan/Desktop/512.py =====
14
2
28
>>>
===== RESTART: C:/Users/PowerMan/Desktop/512.py =====
12
30
360
>>>
Ln: 13 Col: 4
```

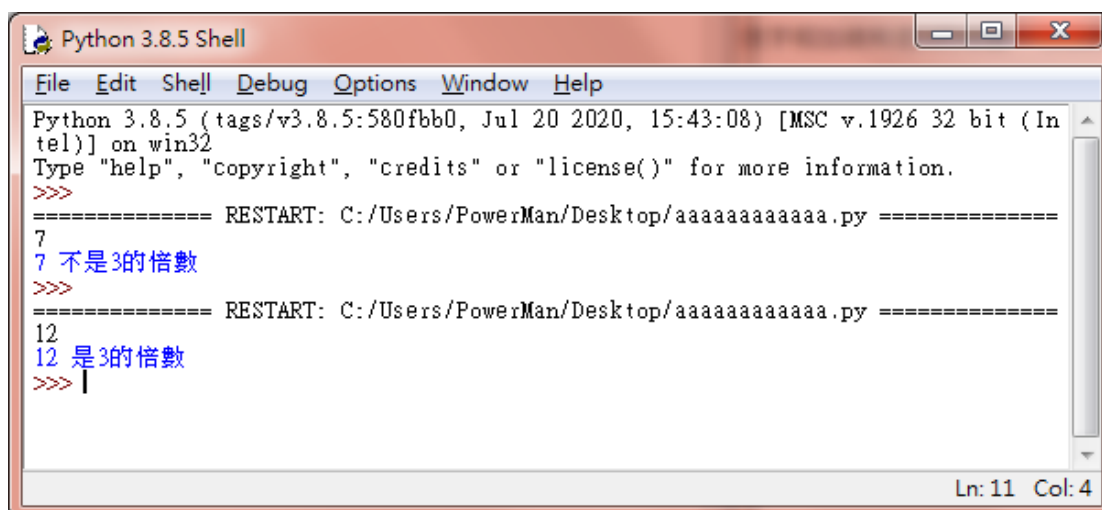
題目說明：判斷一個正整數是否為 3 的倍數

程式碼：



```
*333.py - C:/Users/PowerMan/Desktop/333.py (3.8.5)*
File Edit Format Run Options Window Help
a=input('') #使用者輸入一個數
sum=0
for i in range(len(a)): #設定for迴圈 range為a的長度
    sum=sum+int(a[i]) #算a的數字全相加
if sum%3==0: #如果sum能整除3
    print(a, '是3的倍數') #印出a是3得倍數
else: #否則執行該行
    print(a, '不是3的倍數') #印出a不是3得倍數
Ln: 8 Col: 28
```

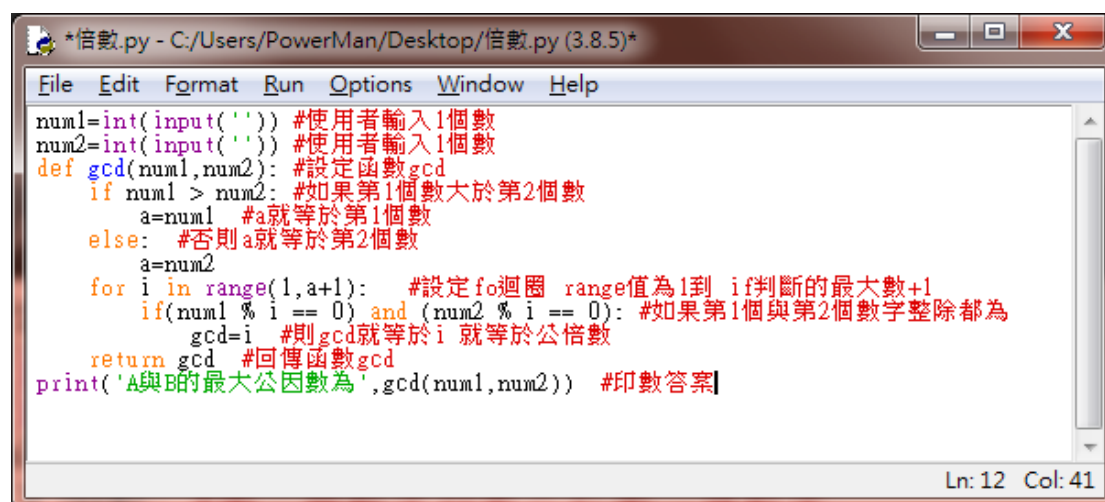
程式執行結果：



```
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/PowerMan/Desktop/aaaaaaaaaaaaa.py =====
7
7 不是3的倍數
>>>
===== RESTART: C:/Users/PowerMan/Desktop/aaaaaaaaaaaaa.py =====
12
12 是3的倍數
>>> |
Ln: 11 Col: 4
```

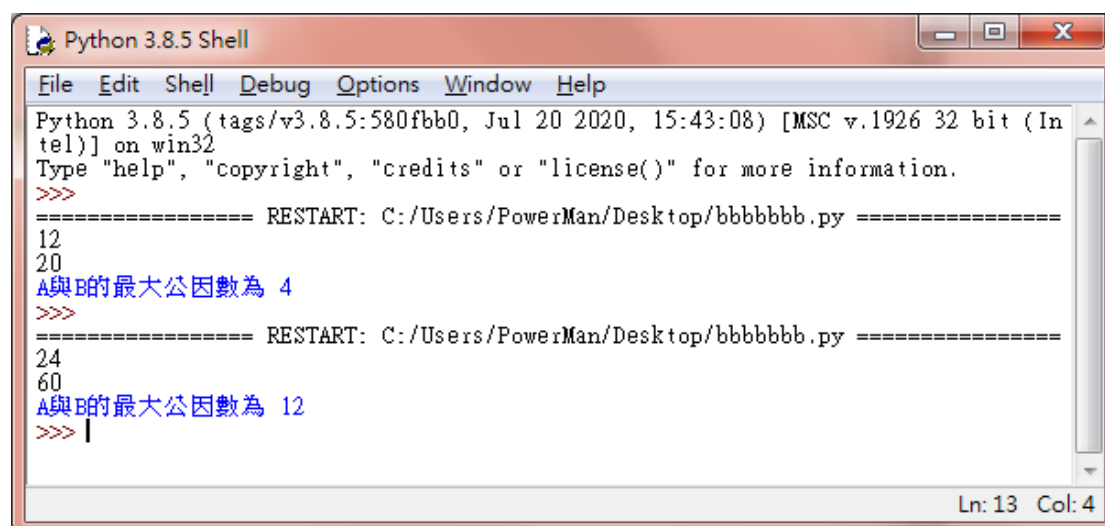
題目說明：求兩數的最大公因數

程式碼：



```
*信數.py - C:/Users/PowerMan/Desktop/信數.py (3.8.5)*
File Edit Format Run Options Window Help
num1=int(input('')) #使用者輸入1個數
num2=int(input('')) #使用者輸入1個數
def gcd(num1,num2): #設定函數gcd
    if num1 > num2: #如果第1個數大於第2個數
        a=num1 #a就等於第1個數
    else: #否則a就等於第2個數
        a=num2
    for i in range(1,a+1): #設定for迴圈 range值為1到 if判斷的最大數+1
        if(num1 % i == 0) and (num2 % i == 0): #如果第1個與第2個數字整除都為
            gcd=i #則gcd就等於i 就等於公倍數
    return gcd #回傳函數gcd
print('A與B的最大公因數為',gcd(num1,num2)) #印數答案
Ln: 12 Col: 41
```

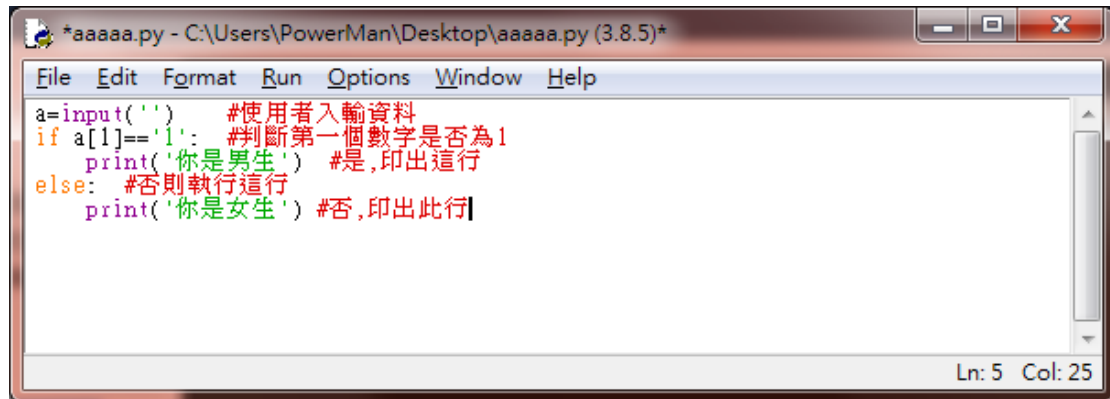
程式執行結果：



```
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/PowerMan/Desktop/bbbbbbb.py =====
12
20
A與B的最大公因數為 4
>>>
===== RESTART: C:/Users/PowerMan/Desktop/bbbbbbb.py =====
24
60
A與B的最大公因數為 12
>>> |
Ln: 13 Col: 4
```

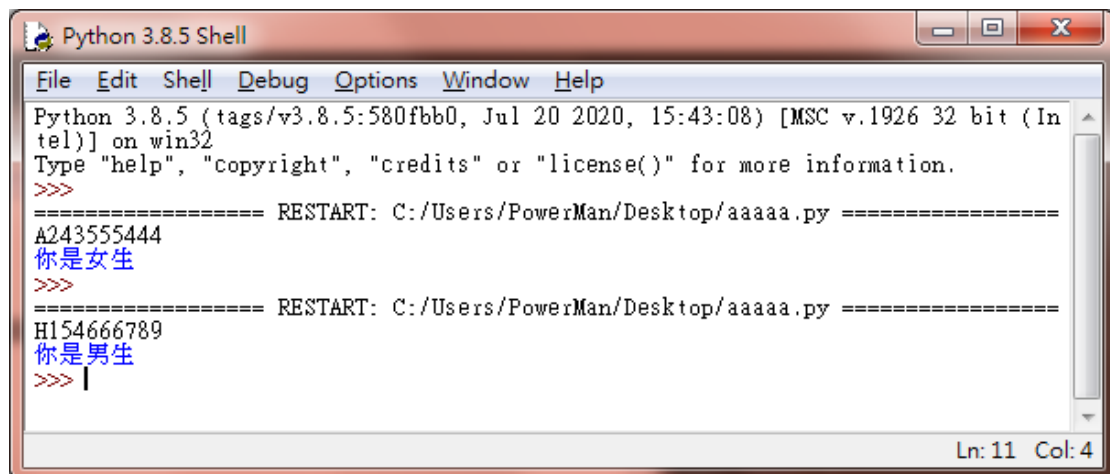
題目說明：依身分證的第 2 個字判斷是男生 or 女生

程式碼：



```
*aaaaa.py - C:\Users\PowerMan\Desktop\aaaaa.py (3.8.5)*
File Edit Format Run Options Window Help
a=input('') #使用者輸入資料
if a[1]=='1': #判斷第一個數字是否為1
    print('你是男生') #是,印出這行
else: #否則執行這行
    print('你是女生') #否,印出此行
Ln: 5 Col: 25
```

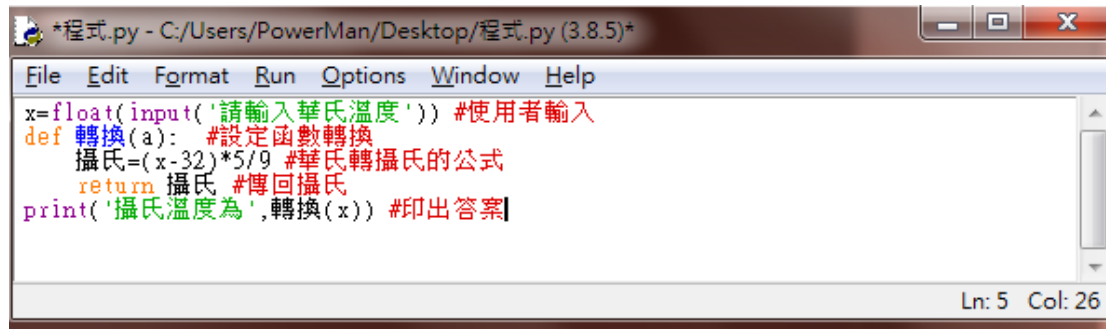
程式執行結果：



```
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/PowerMan/Desktop/aaaaa.py =====
A243555444
你是女生
>>>
===== RESTART: C:/Users/PowerMan/Desktop/aaaaa.py =====
H154666789
你是男生
>>> |
Ln: 11 Col: 4
```

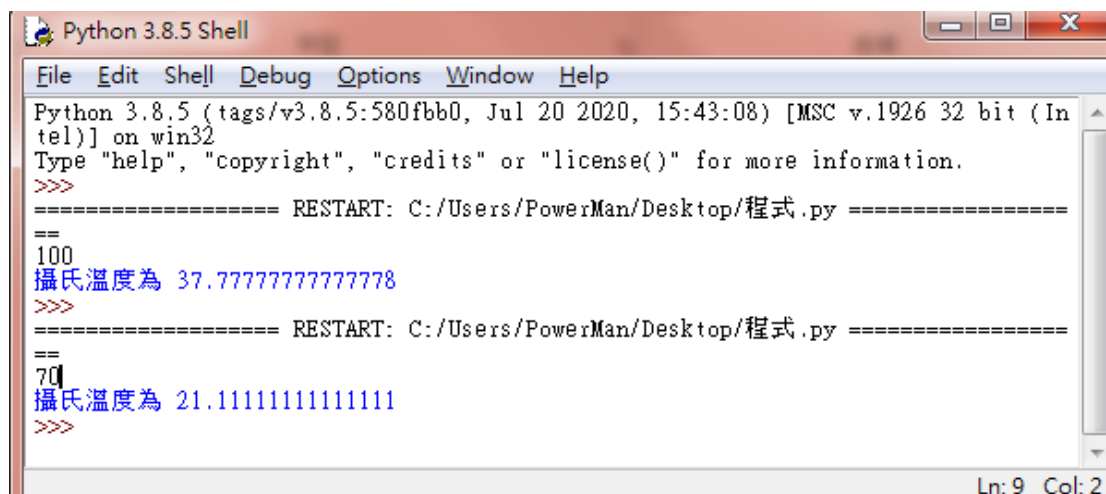

題目說明：華氏轉攝氏

程式碼：



```
*程式.py - C:/Users/PowerMan/Desktop/程式.py (3.8.5)*
File Edit Format Run Options Window Help
x=float(input('請輸入華氏溫度')) #使用者輸入
def 轉換(a): #設定函數轉換
    攝氏=(x-32)*5/9 #華氏轉攝氏的公式
    return 攝氏 #傳回攝氏
print('攝氏溫度為',轉換(x)) #印出答案
Ln: 5 Col: 26
```

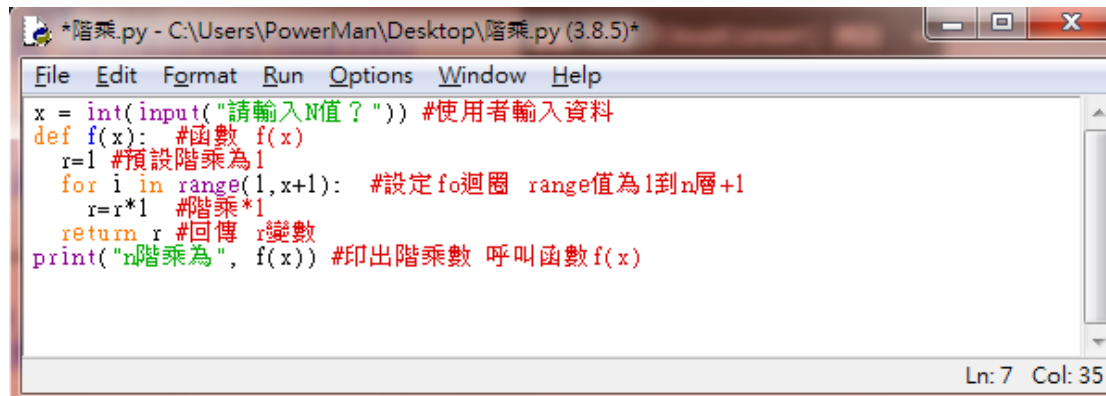
程式執行結果：



```
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/PowerMan/Desktop/程式.py =====
==
100
攝氏溫度為 37.77777777777778
>>>
===== RESTART: C:/Users/PowerMan/Desktop/程式.py =====
==
70
攝氏溫度為 21.111111111111111
>>>
Ln: 9 Col: 2
```

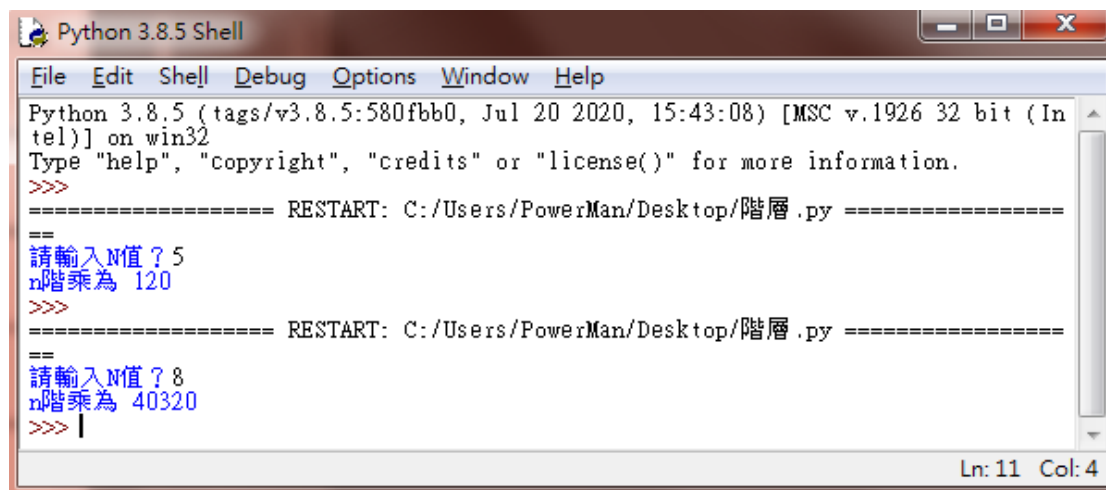
題目說明：求 n 階乘

程式碼：



```
*階乘.py - C:\Users\PowerMan\Desktop\階乘.py (3.8.5)*
File Edit Format Run Options Window Help
x = int(input("請輸入N值?")) #使用者輸入資料
def f(x): #函數 f(x)
    r=1 #預設階乘為1
    for i in range(1,x+1): #設定for迴圈 range值為1到n層+1
        r=r*i #階乘*i
    return r #回傳 r變數
print("n階乘為", f(x)) #印出階乘數 呼叫函數f(x)
Ln: 7 Col: 35
```

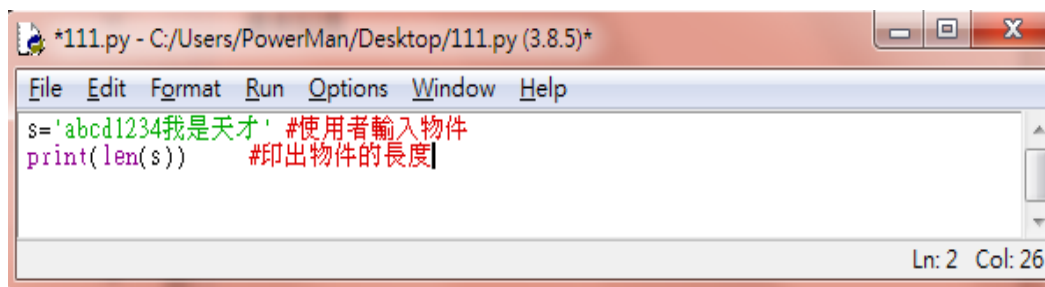
程式執行結果：



```
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/PowerMan/Desktop/階層.py =====
==
請輸入N值? 5
n階乘為 120
>>>
===== RESTART: C:/Users/PowerMan/Desktop/階層.py =====
==
請輸入N值? 8
n階乘為 40320
>>> |
Ln: 11 Col: 4
```

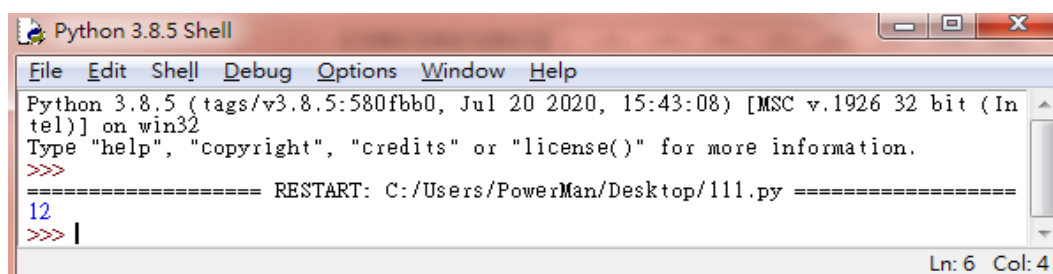
題目說明：計算長度函式

程式碼：



```
*111.py - C:/Users/PowerMan/Desktop/111.py (3.8.5)*
File Edit Format Run Options Window Help
s='abcd1234我是天才' #使用者輸入物件
print(len(s)) #印出物件的長度
Ln: 2 Col: 26
```

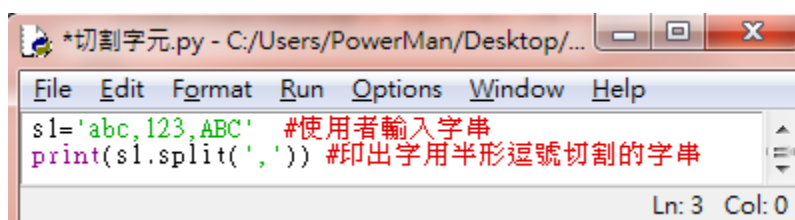
程式執行結果：



```
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/PowerMan/Desktop/111.py =====
12
>>> |
Ln: 6 Col: 4
```

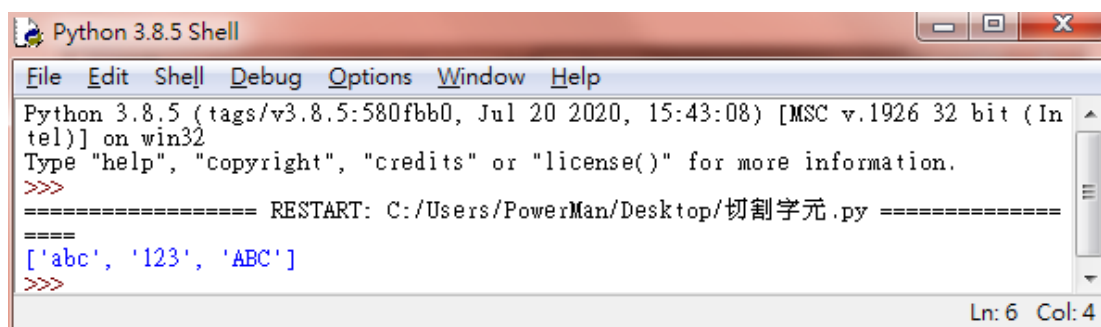
題目說明：切串分割

程式碼：



```
*切割字元.py - C:/Users/PowerMan/Desktop/...
File Edit Format Run Options Window Help
s1='abc,123,ABC' #使用者輸入字串
print(s1.split(',')) #印出字用半形逗號切割的字串
Ln: 3 Col: 0
```

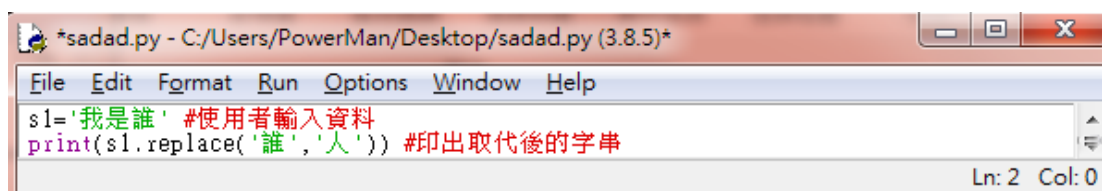
程式執行結果：



```
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/PowerMan/Desktop/切割字元.py =====
====
['abc', '123', 'ABC']
>>>
Ln: 6 Col: 4
```

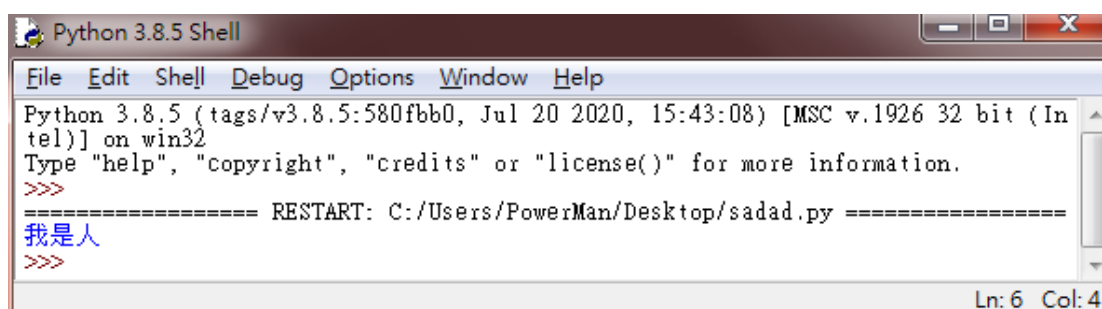
題目說明：取代字串

程式碼：



```
*sadam.py - C:/Users/PowerMan/Desktop/sadam.py (3.8.5)*
File Edit Format Run Options Window Help
s1='我是誰' #使用者輸入資料
print(s1.replace('誰','人')) #印出取代後的字串
Ln: 2 Col: 0
```

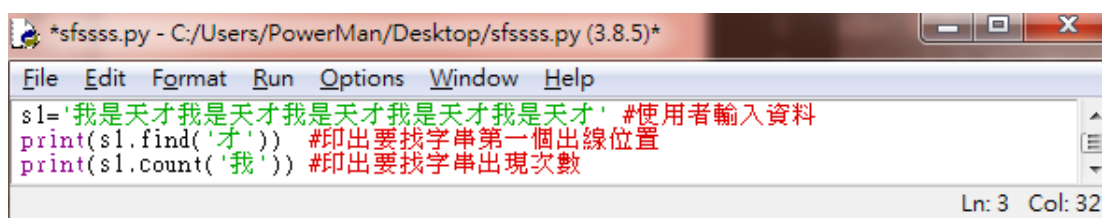
程式執行結果：



```
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/PowerMan/Desktop/sadam.py =====
我是人
>>>
Ln: 6 Col: 4
```

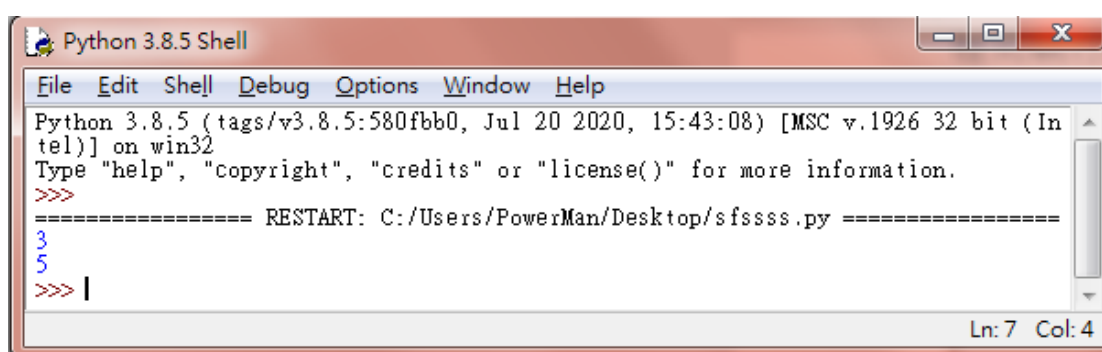
題目說明：第一個出現要找字串的位置、要找字串出現次數

程式碼：



```
*sfssss.py - C:/Users/PowerMan/Desktop/sfssss.py (3.8.5)*
File Edit Format Run Options Window Help
s1='我是天才我是天才我是天才我是天才我是天才' #使用者輸入資料
print(s1.find('才')) #印出要找字串第一個出線位置
print(s1.count('我')) #印出要找字串出現次數
Ln: 3 Col: 32
```

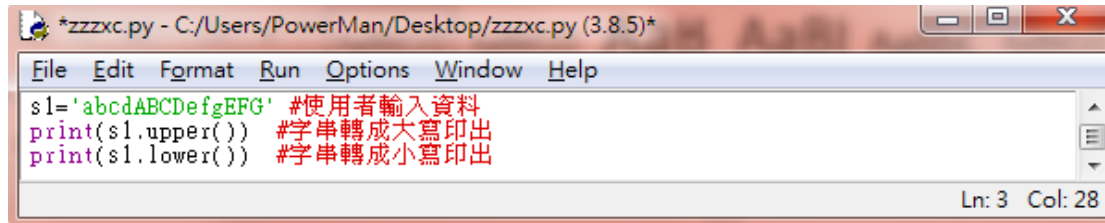
程式執行結果：



```
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/PowerMan/Desktop/sfssss.py =====
3
5
>>> |
Ln: 7 Col: 4
```

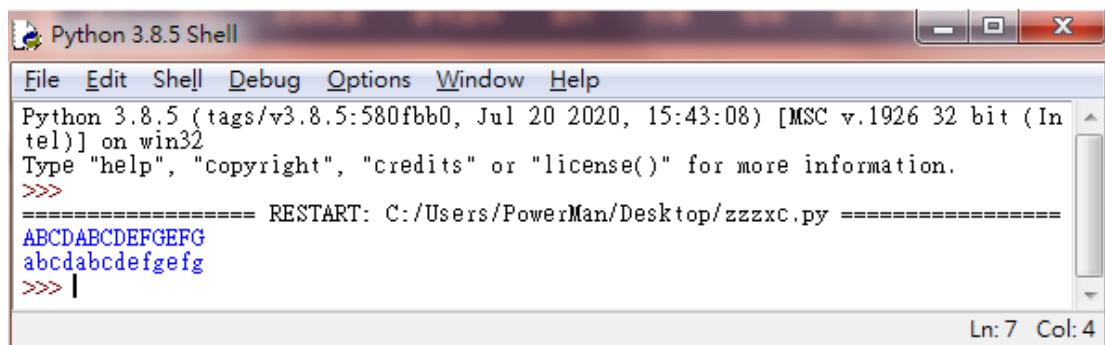
題目說明：字串大小寫轉換

程式碼：



```
*zzxc.py - C:/Users/PowerMan/Desktop/zzxc.py (3.8.5)*
File Edit Format Run Options Window Help
s1='abcdABCDefgEFG' #使用者輸入資料
print(s1.upper()) #字串轉成大寫印出
print(s1.lower()) #字串轉成小寫印出
Ln: 3 Col: 28
```

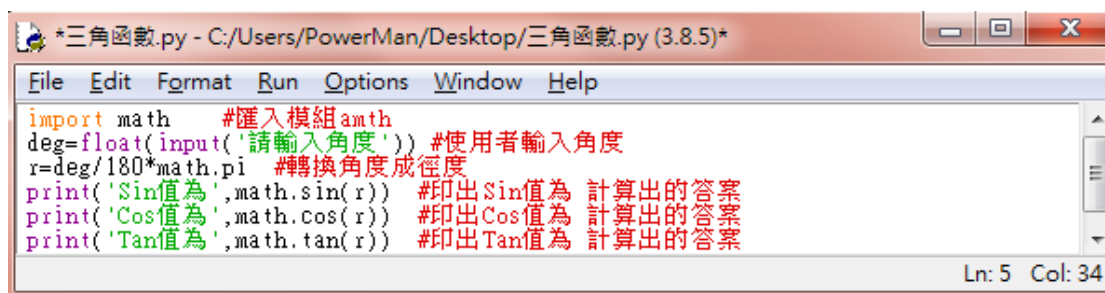
程式執行結果：



```
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/PowerMan/Desktop/zzxc.py =====
ABCDABCDEFGEFG
abcdabcdeffefg
>>> |
Ln: 7 Col: 4
```

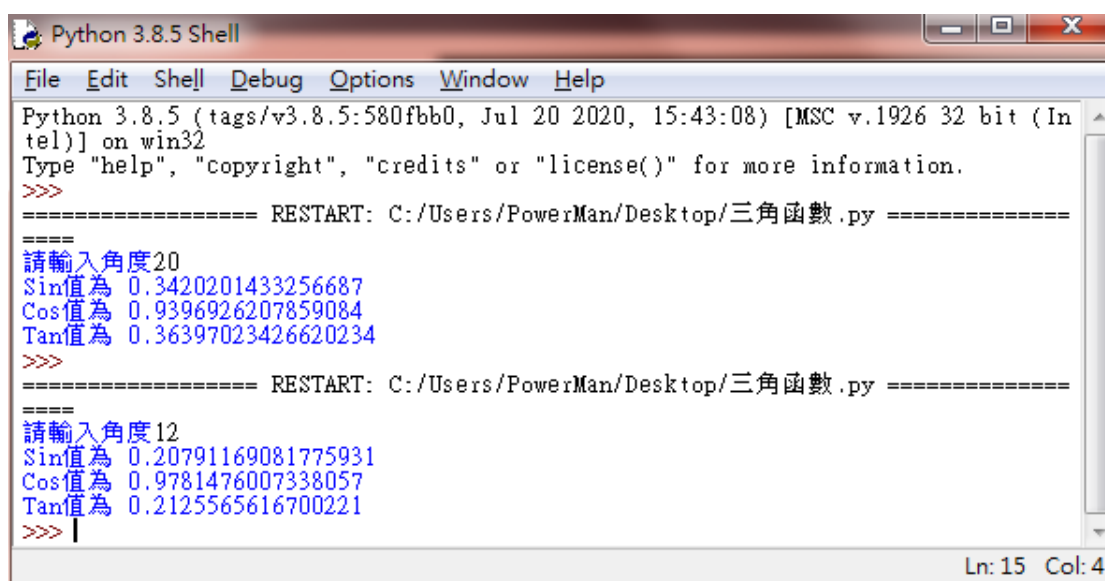
題目說明：計算三角函數

程式碼：



```
*三角函數.py - C:/Users/PowerMan/Desktop/三角函數.py (3.8.5)*
File Edit Format Run Options Window Help
import math #匯入模組 math
deg=float(input('請輸入角度')) #使用者輸入角度
r=deg/180*math.pi #轉換角度成弧度
print('Sin值為',math.sin(r)) #印出Sin值為 計算出的答案
print('Cos值為',math.cos(r)) #印出Cos值為 計算出的答案
print('Tan值為',math.tan(r)) #印出Tan值為 計算出的答案
Ln: 5 Col: 34
```

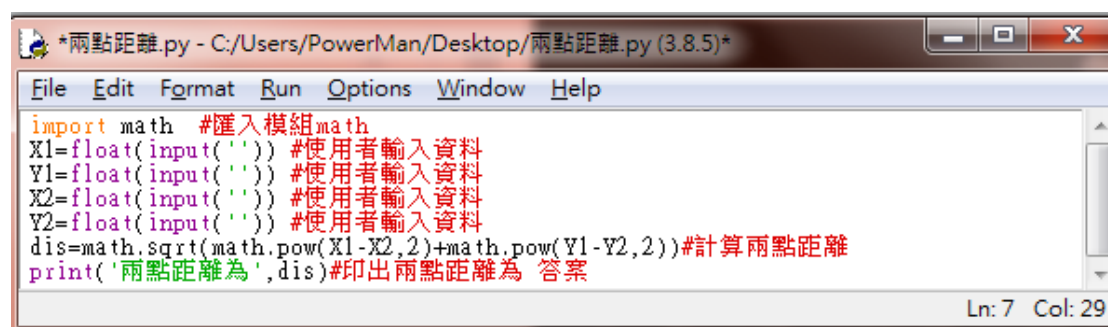
程式執行結果：



```
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/PowerMan/Desktop/三角函數.py =====
====
請輸入角度20
Sin值為 0.3420201433256687
Cos值為 0.9396926207859084
Tan值為 0.36397023426620234
>>>
===== RESTART: C:/Users/PowerMan/Desktop/三角函數.py =====
====
請輸入角度12
Sin值為 0.20791169081775931
Cos值為 0.9781476007338057
Tan值為 0.2125565616700221
>>> |
Ln: 15 Col: 4
```

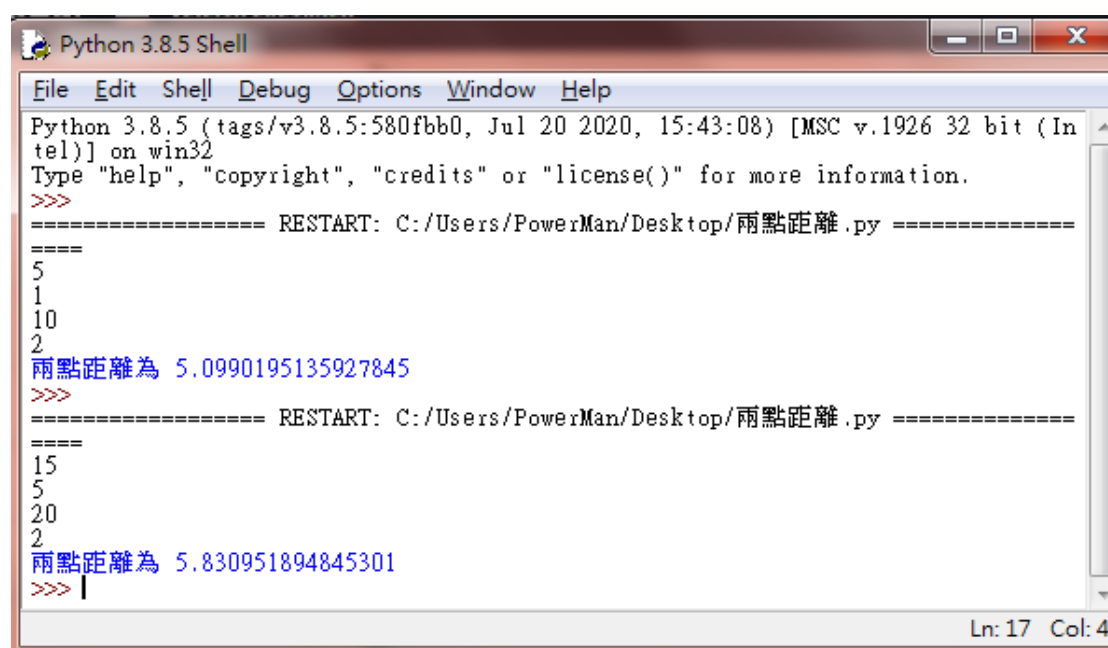
題目說明：計算兩點距離

程式碼：



```
*兩點距離.py - C:/Users/PowerMan/Desktop/兩點距離.py (3.8.5)*
File Edit Format Run Options Window Help
import math #匯入模組math
X1=float(input('')) #使用者輸入資料
Y1=float(input('')) #使用者輸入資料
X2=float(input('')) #使用者輸入資料
Y2=float(input('')) #使用者輸入資料
dis=math.sqrt(math.pow(X1-X2,2)+math.pow(Y1-Y2,2))#計算兩點距離
print('兩點距離為',dis)#印出兩點距離為 答案
Ln: 7 Col: 29
```

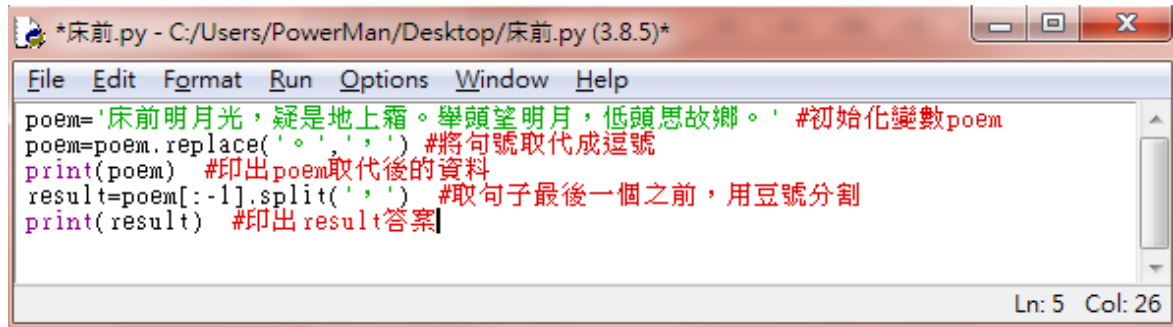
程式執行結果：



```
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/PowerMan/Desktop/兩點距離.py =====
====
5
1
10
2
兩點距離為 5.0990195135927845
>>>
===== RESTART: C:/Users/PowerMan/Desktop/兩點距離.py =====
====
15
5
20
2
兩點距離為 5.830951894845301
>>> |
Ln: 17 Col: 4
```

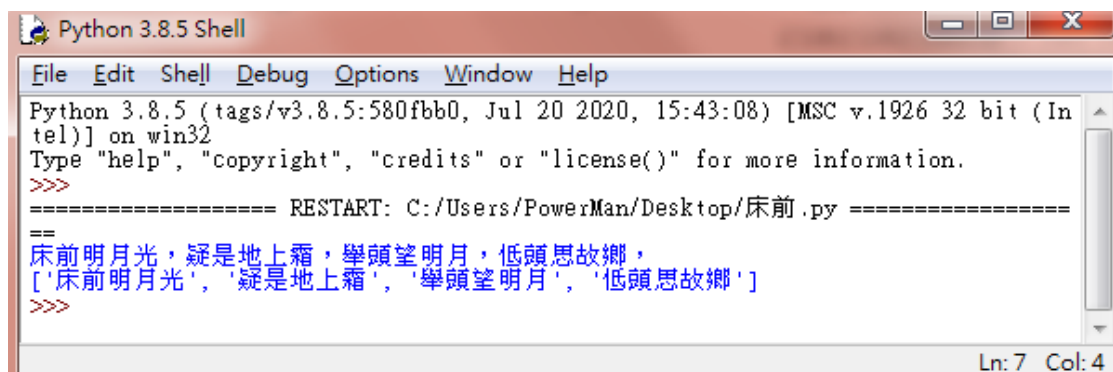
題目說明：取出詩中的每一個句子

程式碼：



```
*床前.py - C:/Users/PowerMan/Desktop/床前.py (3.8.5)*
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。' #初始化變數poem
poem=poem.replace('。','，') #將句號取代成逗號
print(poem) #印出poem取代後的資料
result=poem[:-1].split(',') #取句子最後一個之前，用逗號分割
print(result) #印出result答案
Ln: 5 Col: 26
```

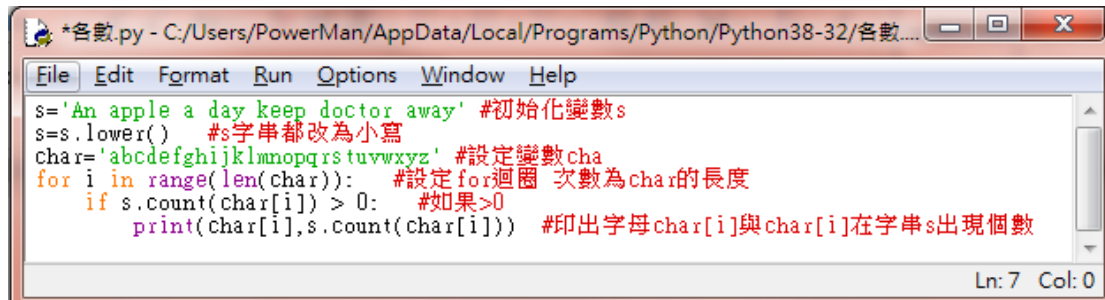
程式執行結果：



```
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/PowerMan/Desktop/床前.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']
>>>
Ln: 7 Col: 4
```

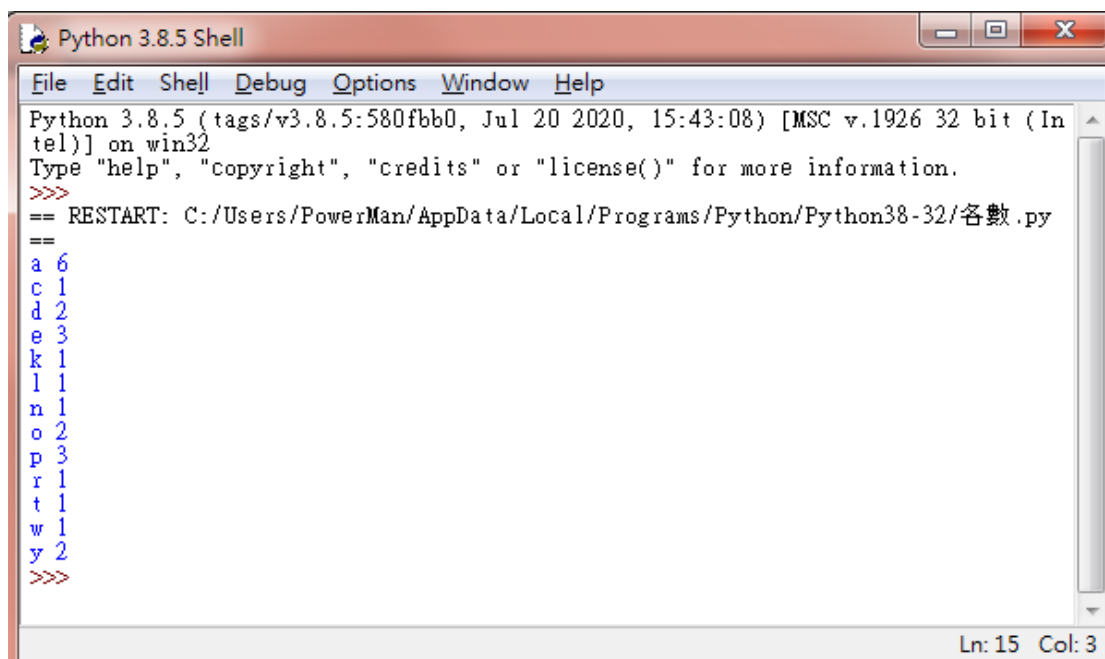

題目說明：計算英文字母個數

程式碼：



```
*各數.py - C:/Users/PowerMan/AppData/Local/Programs/Python/Python38-32/各數...
File Edit Format Run Options Window Help
s='An apple a day keep doctor away' #初始化變數s
s=s.lower() #s字串都改為小寫
char='abcdefghijklmnopqrstuvwxyz' #設定變數cha
for i in range(len(char)): #設定for迴圈 次數為char的長度
    if s.count(char[i]) > 0: #如果>0
        print(char[i],s.count(char[i])) #印出字母char[i]與char[i]在字串s出現個數
Ln: 7 Col: 0
```

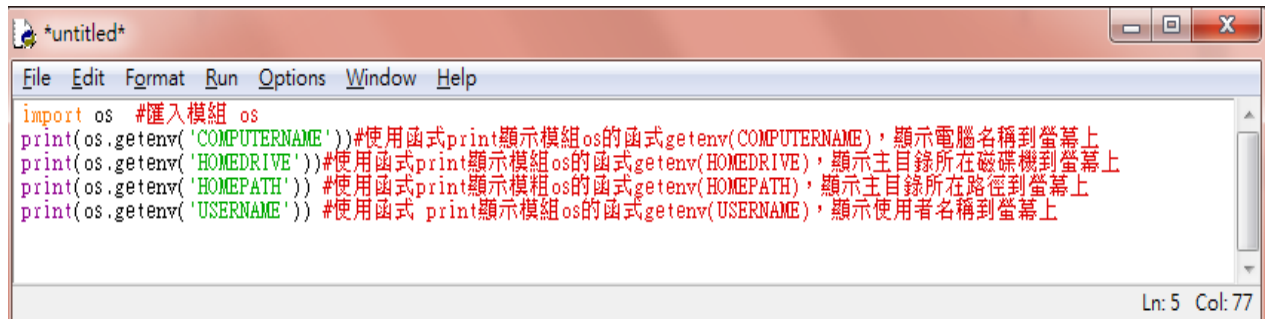
程式執行結果：



```
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/PowerMan/AppData/Local/Programs/Python/Python38-32/各數.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: 15 Col: 3
```

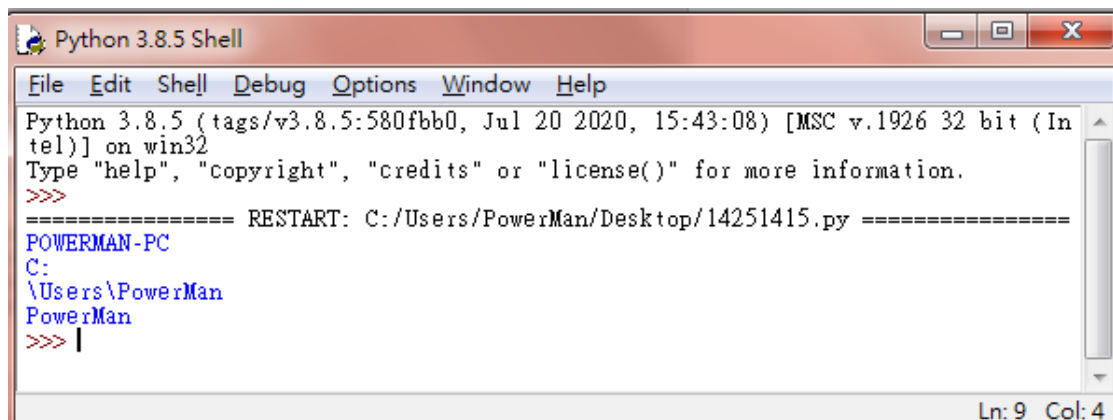
題目說明：顯示環境變數

程式碼：



```
File Edit Format Run Options Window Help
import os #匯入模組 os
print(os.getenv('COMPUTERNAME'))#使用函式print顯示模組os的函式getenv(COMPUTERNAME)，顯示電腦名稱到螢幕上
print(os.getenv('HOMEDRIVE'))#使用函式print顯示模組os的函式getenv(HOMEDRIVE)，顯示主目錄所在磁碟機到螢幕上
print(os.getenv('HOMEPATH')) #使用函式print顯示模組os的函式getenv(HOMEPATH)，顯示主目錄所在路徑到螢幕上
print(os.getenv('USERNAME')) #使用函式 print顯示模組os的函式getenv(USERNAME)，顯示使用者名稱到螢幕上
Ln: 5 Col: 77
```

程式執行結果：



```
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/PowerMan/Desktop/14251415.py =====
POWERMAN-PC
C:
\Users\PowerMan
PowerMan
>>> |
Ln: 9 Col: 4
```