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1101-4205AI 思維

範例程式 1

判斷 A、B 的大小或相等

邏輯判斷

連續輸入

再結束

三角形三個邊長度比較

4. 三角形的三邊 : nested (if - else)

```

print('input 3 integers a,b,c:')
a=input('input a='); b=input('input b='); c=input('input c=')
a=int(a); b=int(b); c=int(c)
if(a >= b) and (a >= c):
    A=a
    if(b >= c ):
        B=b
        C=c
    else:
        B=c
        C=b
else:
    if(b >= c):
        A=b
        if(c >= a):
            B=c
            C=a
        else:
            B=a
            C=c
    else:
        A=c
        if(b > a):
            B=b
            C=a
        else:
            B=a
            C=b
print('a,b,c=',a,b,c)
print('A,B,C=',A,B,C)
if(B+C > A): print(A,B,C, ' can be 3 sides of a triangle.')
else: print(A,B,C, ' can not form a triangle.')

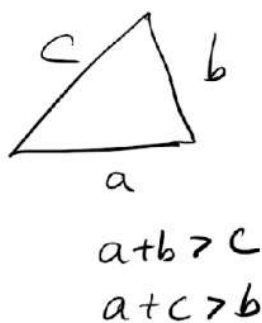
```

```

input 3 i
input a=4
input b=5
input c=1
a,b,c= 4
A,B,C= 12
12 5 4 c
-----
input 3 i
input a=5
input b=4
input c=5
a,b,c= 3
A,B,C= 5
5 4 3 ca

```

基本條件



```

print('input 3 integers a,b,c:')
a=input('input a='); b=input('input b='); c=input('input c=')
a=int(a); b=int(b); c=int(c)
if(a >= b) and (a >= c):
    A=a
    if(b >=c):
        B=b
        C=c
    else:
        B=c
        C=b
else:
    if(b >=c):
        A=b
        if(c >= a):
            B=c
            C=a
        else:
            B=a
            C=c
    else:
        A=c
        if(b > a):
            B=b
            C=a
        else:
            B=a
            C=b
print('a,b,c=',a,b,c)
print('A,B,C=',A,B,C)
if(B+C > A): print(A,B,C, ' can be 3 sides of a tria

```

5. 三角形的三邊 : sorted

- 字串str : split()
- 字串str : replace()
- 列表list : sorted()

```

s1= input("請輸入三角形的3邊長; a,b,c: ")
print(s1)
s2=s1.replace(',',' ')
L=s2.split(' ')
print(L)
LS=sorted(L)
print(LS)

```

```

請輸入三角形的3邊長; a,b,c: 4,6
4,6 3
['4', '6', '3']
['3', '4', '6']

```

String

Str...字串

數字...依大小排列

利用『sorted』指令

```

/home/mengwen/cod0929/0929-1.py Keyboard shortcuts: Normal
1 s1= input("請輸入三角形的3邊長; a,b,c:")
2 s2=s1.replace(' ','')
3 s2=print('s2=',s2)
4 L=s2.split(' ')
5 for i in range (len(L)):
6     L[i]=int(L[i])
7 LS=sorted(L)
8 print(LS)
9

請輸入三角形的3邊長; a,b,c: 3,4,5
s2= 3 4 5
Traceback (most recent call last):
  File "/home/mengwen/cod0929/0929-1.py", line 4, in <module>
    L=s2.split(' ')
AttributeError: 'NoneType' object has no attribute 'split'
>>>

```

註解：



前後加入『'''』

```

'''
加入註解文字
'''

```

```

/home/mengwen/cod0929/0929-1.py
1 a=3
2 b=4
3 if (a>b):
4     print(a,b)
5 else:
6     print(b,a)
7
8
9
10
11
4 3
>>>

```

數字大的在前
 數字小的在後
 用 if 和 else

```

A=3
B=4
If (a>b)
    Print(a,b)
Else:
    Print(b,a)

```

```

/home/mengwen/cod0929/0929-1.py
1 a=[1,5,4,3,9,8]
2 N=len(a)
3 print(N,a)
4 b=sorted(a)
5 for i in range (N):
6     print(i,a[i],b[i])
7
8 ...
9 a=5
10 b=3
11 if(a>b):
6 [1, 5, 4, 3, 9, 8]
0 1 1
1 5 3
2 4 4
3 3 5
4 9 8
5 8 9
>>>

```

```

a=[1,5,4,3,9,8]
N=len(a)
print(N,a)
b=sorted(a)
for i in range (N):
    print(i,a[i],b[i])

```

依大小...排序



/home/mengwen/cod0929/0929-1.py

Keyboard

```

1 a=[6,2,5,3,9,8]
2 c=['Yumi','Tom','Jack','Andy','Merry','David']
3 N=len(a)
4 print(N,a)
5 b=sorted(a)
6 for i in range (N):
7     print(i,a[i],b[i])
8
9
10
11
6 [6, 2, 5, 3, 9, 8]
0 6 2
1 2 3
2 5 5
3 3 6
4 9 8
5 8 9
>>>

```

```

a=[6,2,5,3,9,8]
c=['Yumi','Tom','Jack','Andy','Merry','David']
N=len(a)
print(N,a)
b=sorted(a)
for i in range (N):
    print(i,a[i],b[i])

```

人名與成績互相對照排序

```

/home/mengwen/cod0929/0929-1.py
Keyboard shortcuts: Normal Share Save Save as... >>> Run
1 a=[6,2,5,3,9,8]
2 c=['Yumi','Tom','Jack','Andy','Merry','David']
3 N=len(a)
4 print(N,a)
5 print(c)
6 b=sorted(a)
7 for i in range (N):
8     for j in range (N):
9         if(a[j]==b[i]):k=j
10    print(i,a[i],b[i],c[k])
11
12
13
6 [6, 2, 5, 3, 9, 8]
['Yumi', 'Tom', 'Jack', 'Andy', 'Merry', 'David']
0 6 2 Tom
1 2 3 Andy
2 5 5 Jack
3 3 6 Yumi
4 9 8 David
5 8 9 Merry
>>> 

```

```

a=[6,2,5,3,9,8]
c=['Yumi','Tom','Jack','Andy','Merry','David']
N=len(a)
print(N,a)
print(c)
b=sorted(a)
for i in range (N):
    for j in range (N):
        if(a[j]==b[i]):k=j
    print(i,a[i],b[i],c[k])

```

人名與成績互相對照排序



/home/mengwen/cod0929/0929-1.py

```

1 for i in range(1,8):
2     s=''*i
3     print(s)
4 for i in range(6,0,-1):
5     s=''*i
6     print(s)
7
8
9
10
11
12 '''
13 a=[65,28,51,37,93,82]
```

```

**
**
***
****
*****
*****
*****
*****
*****
****
***
**
*
*
>>>
```

1. print star on the screen 1

<pre> for i in range(1,8): s=''*i print(s) for i in range(6,0,-1): s=''*i print(s)</pre>	<pre> * ** *** **** ***** ***** ***** ***** ***** **** *** ** *</pre>
--	---

2. print star on the screen 2


- o input
- o if ... elif ... else ...

<pre> for i in range(1,8): s=' '*i print(s) for i in range(6,0,-1): s=' '*i print(s)</pre>	<pre> * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *</pre>
--	--

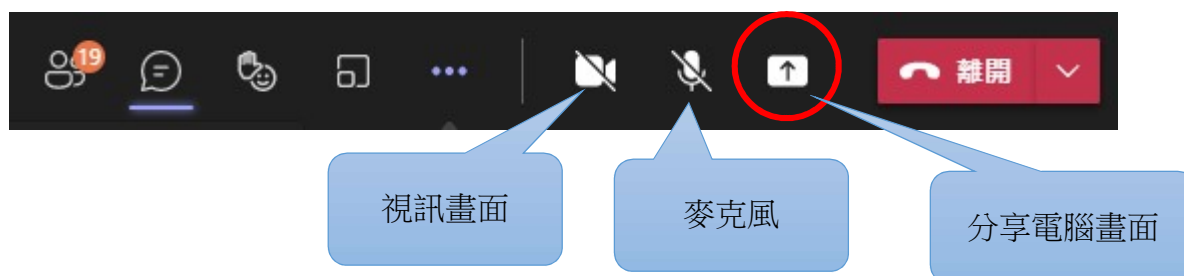
```

/home/mengwen/cod0929/0929-1.
Keyboard shortcuts:
1 h=3; C=15
2 for i in range(1,h+1):
3     s=' *(C-i)+'*'*i+'***(i-1)
4     print(s)
5 h=4; C=15
6 for i in range(1,h+1):
7     s=' *(C-i)+'*'*i+'***(i-1)
8     print(s)
9 h=3; C=15
10 for i in range(1,h+1):
11     s=' *(C-2)+'| '*3
12     print(s)
13
14
15 '''
16 for i in range(1,10):
17     s='**'*i
18     print(s)

```



TEAMS 分享電腦畫面給大家：



電腦、平版（或手機）可以同時連 TEAMS

用電腦鍵入程式，平版看&聽 TEAMS 畫面。
 需要分享畫面給老師時，用電腦操作。

缺點：IPad AIR...TYPE C...
 耳機是 3.5 接頭～～