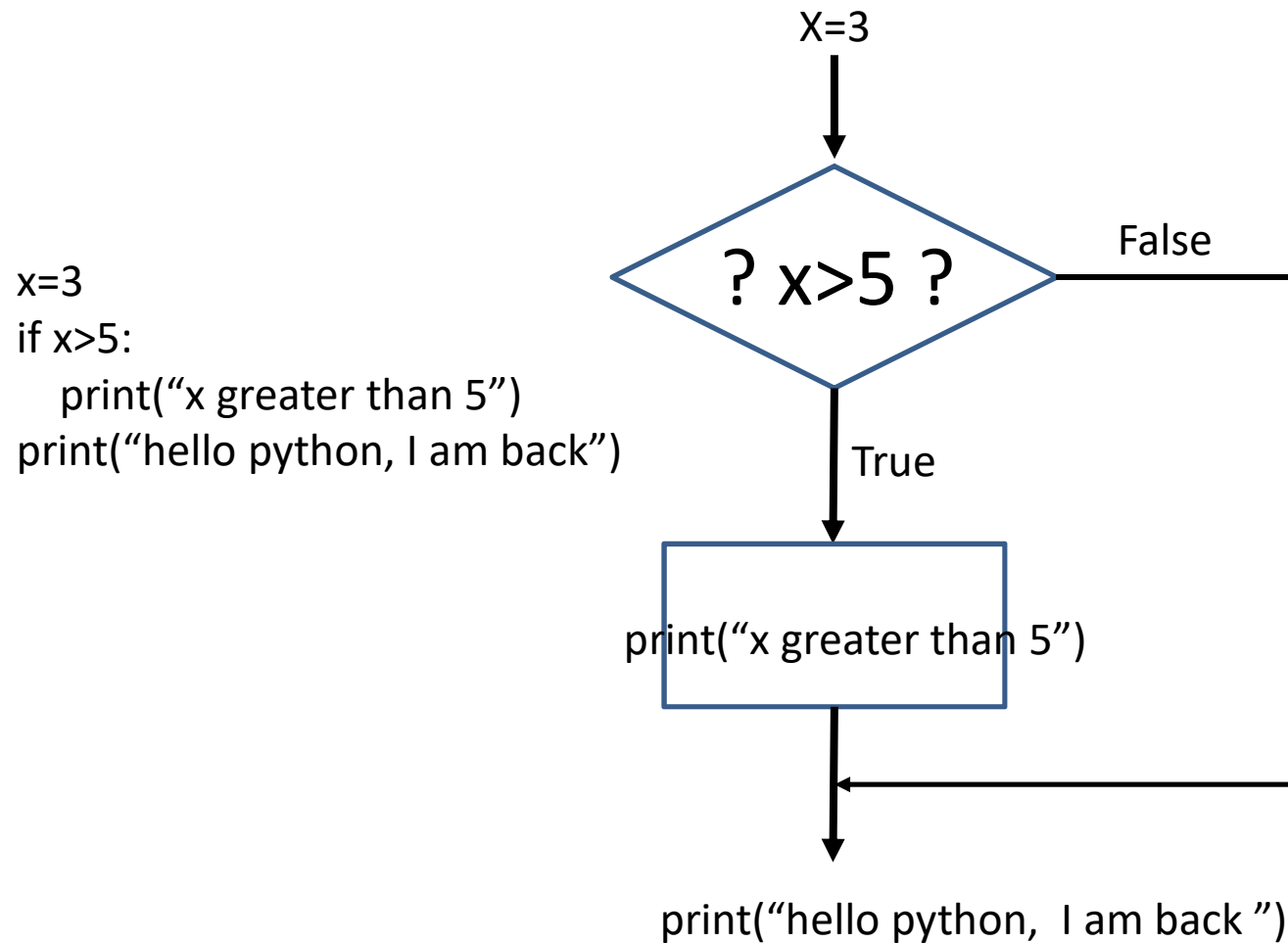


Review

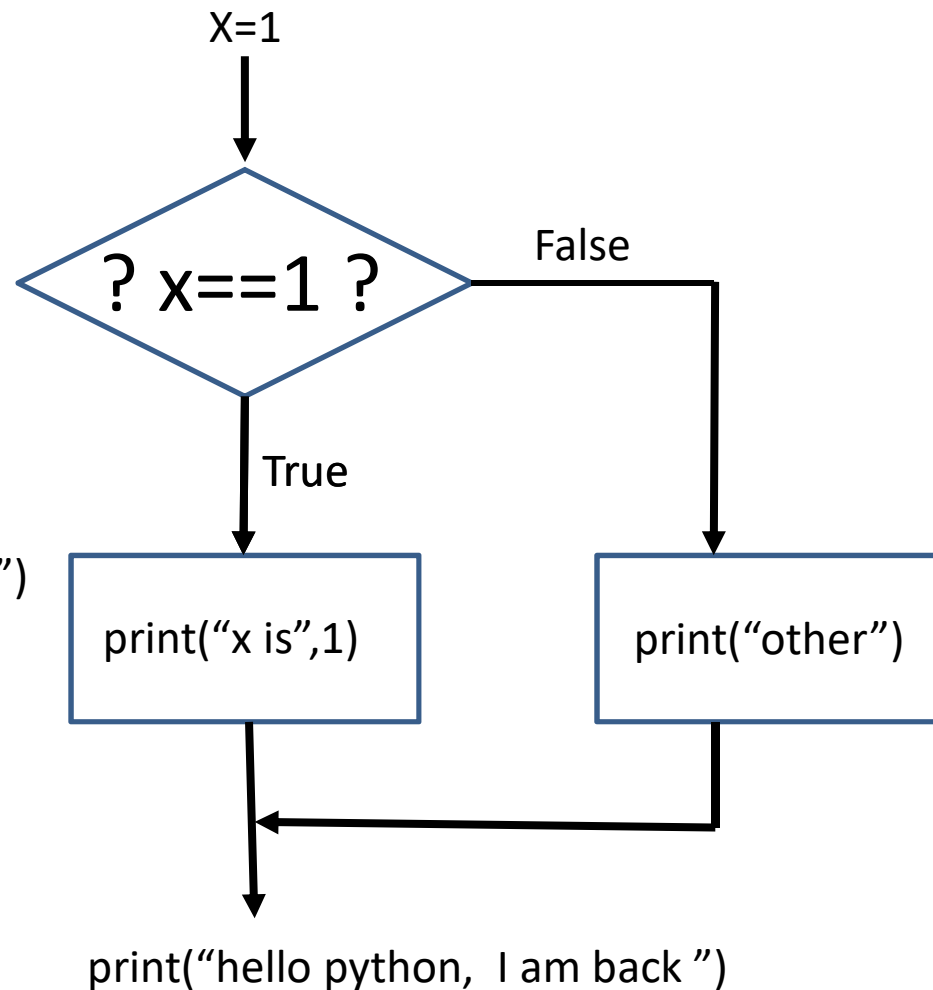
- Interactive mode (*.ipynb) and script mode (*.py)
- Hk2: function call another function
- Recursion : Function call itself
- Fruitful function (return)
- If. If else
- While
- Good web for learning python **step by step** :
<http://pythontutor.com/>

if statement : flow chart



if else statement : flow chart

```
x=1
if x==1:
    print("x is",1)
else:
    print("other")
print("hello python, I am back")
```




The while statement

- 1) Determine whether the condition is true or false
 $n > 0$
- 2) If false, exit the while statement and continue execution at the next statement
- 3) If the condition is true, run the body and then go back to step (1)

```
def countdown(n):  
    while n>0:  
        print(n)  
        n=n-1  
    print("BlastOff !!!")
```

countdown(5) function call

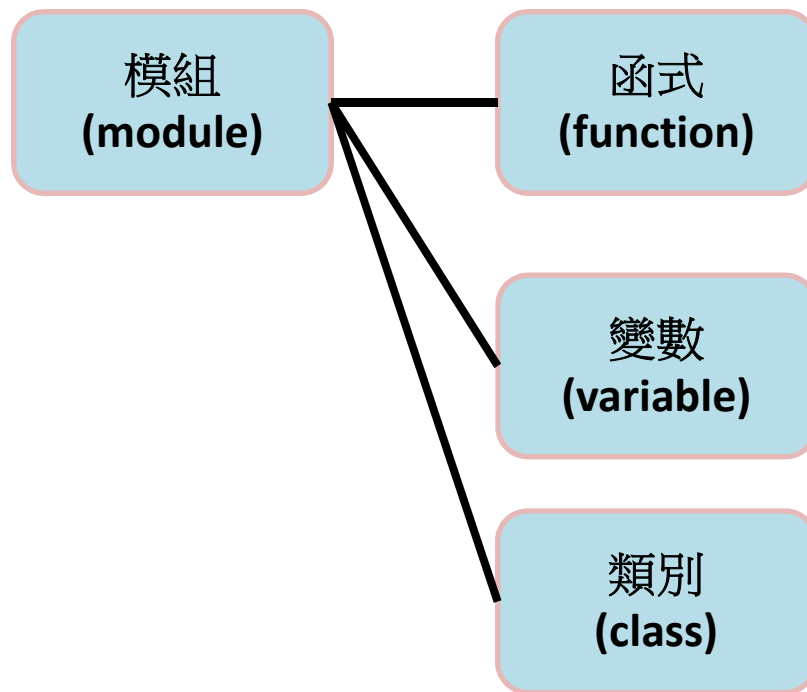


5
4
3
2
1
BlastOff !!!

模組 (module)

- 包含函式和變數的py 檔
- A python file with the .py extension

-



math module, **turtle** module

how to import?

- **from math import exp**
 - `exp(1.0)`
- **import math**
 - `math.exp(1.0)`
- **import turtle**
 - `peter=turtle.Turtle()`
 - The turtle module provides a function called `Turtle()` that creates a Turtle object. Its name is `peter`.