Chapter C

（察するPython入門）

C01

C010

Ctrl + C to stop

```python
while True:
    x = float(input("x: "))

    if x > 0:
        print(f"{x} > 0")
    else:
        print(f"{x} <= 0")
```

```
x: 5↵
5.0 > 0
x: −2↵
−2.0 <= 0 x: 3↵
3.0 > 0
...
x: [Ctrl + C]
```

C011

Enter 'q' to quit.

```python
x = input("x: ")

while x != "q":
    x = float(x)

    if x > 0:
        print(f"{x} > 0")
    else:
        print(f"{x} <= 0")

    x = input("x: ")

print("bye!")
```

```
x: 5↵
5.0 > 0
x: −2↵
−2.0 <= 0 x: q↵
bye!
```

C012

```python
for _ in range(3):
    x = float(input("x: "))

    if x > 0:
        print(f"{x} > 0")
    else:
        print(f"{x} <= 0")

print("bye!")
```

```
x: 5↵
5.0 > 0
x: −2↵
−2.0 <= 0 x: 3↵
3.0 > 0
x: q↵
bye!
```

CO2

C020

```python
for i in range(3):
    print(i)

print("bye!")
```

```
0
1
```

```
  2
  bye!
```

C021

```python
for i in range(1, 10, 1):
    print(i)

print("bye!")
```

```
1
2
3
4
5
6
7
8
9
bye!
```

C022

```python
for i in range(1, 10, 2):
    print(i)

print("bye!")
```

```
1
3
5
7
9
bye!
```

C023

```python
for i in range(10):
    print(2 * i + 1)

print("bye!")
```

```
1
3
5
7
9
11
13
15
17
19
bye!
```

C024

```python
for i in range(10):
    print(f"{i} * {i} = {i ** 2}")

print("bye!")
```

```
0 * 0 = 0
1 * 1 = 1
2 * 2 = 4
3 * 3 = 9
4 * 4 = 16
5 * 5 = 25
6 * 6 = 36
7 * 7 = 49
8 * 8 = 64
9 * 9 = 81
bye!
```

C025

```python
for i in range(10):
    print(f"{i} * {i} = {i ** 2:2d}")

print("bye!")
```

```
0 * 0 =  0
1 * 1 =  1
2 * 2 =  4
3 * 3 =  9
4 * 4 = 16
```

```
5 * 5 = 25
6 * 6 = 36
7 * 7 = 49
8 * 8 = 64
9 * 9 = 81
bye!
```

5 / 6

C03

C030

```
for i in range(3):
    print("the outer loop")
    print(f"i = {i}")
    for j in range(3):
        print("    the inner loop")
        print(f"    j = {j}")

print("bye!")
```

```
the outer loop
i = 0
    the inner loop
    j = 0
    the inner loop
    j = 1
    the inner loop
    j = 2
the outer loop
i = 1
    the inner loop
    j = 0
    the inner loop
    j = 1
    the inner loop
    j = 2
the outer loop
i = 2
    the inner loop
    j = 0
    the inner loop
    j = 1
    the inner loop
    j = 2
bye!
```

C031

```python
for i in range(1, 3+1):
    for j in range(1, 3+1):
        print(f"{i} * {j} = {i * j:2d}")

print("bye!")
```

```
0 * 0 =  0
1 * 1 =  1
2 * 2 =  4
3 * 3 =  9
4 * 4 = 16
5 * 5 = 25
6 * 6 = 36
7 * 7 = 49
8 * 8 = 64
9 * 9 = 81
bye!
```

C032

```python
for i in range(1, 9+1):
    for j in range(1, 9+1):
        print(f"{i * j:2d} ", end="")

    print()

print("bye!")
```

```
 1  2  3  4  5  6  7  8  9
 2  4  6  8 10 12 14 16 18
 3  6  9 12 15 18 21 24 27
 4  8 12 16 20 24 28 32 36
 5 10 15 20 25 30 35 40 45
 6 12 18 24 30 36 42 48 54
 7 14 21 28 35 42 49 56 63
 8 16 24 32 40 48 56 64 72
 9 18 27 36 45 54 63 72 81
bye!
```