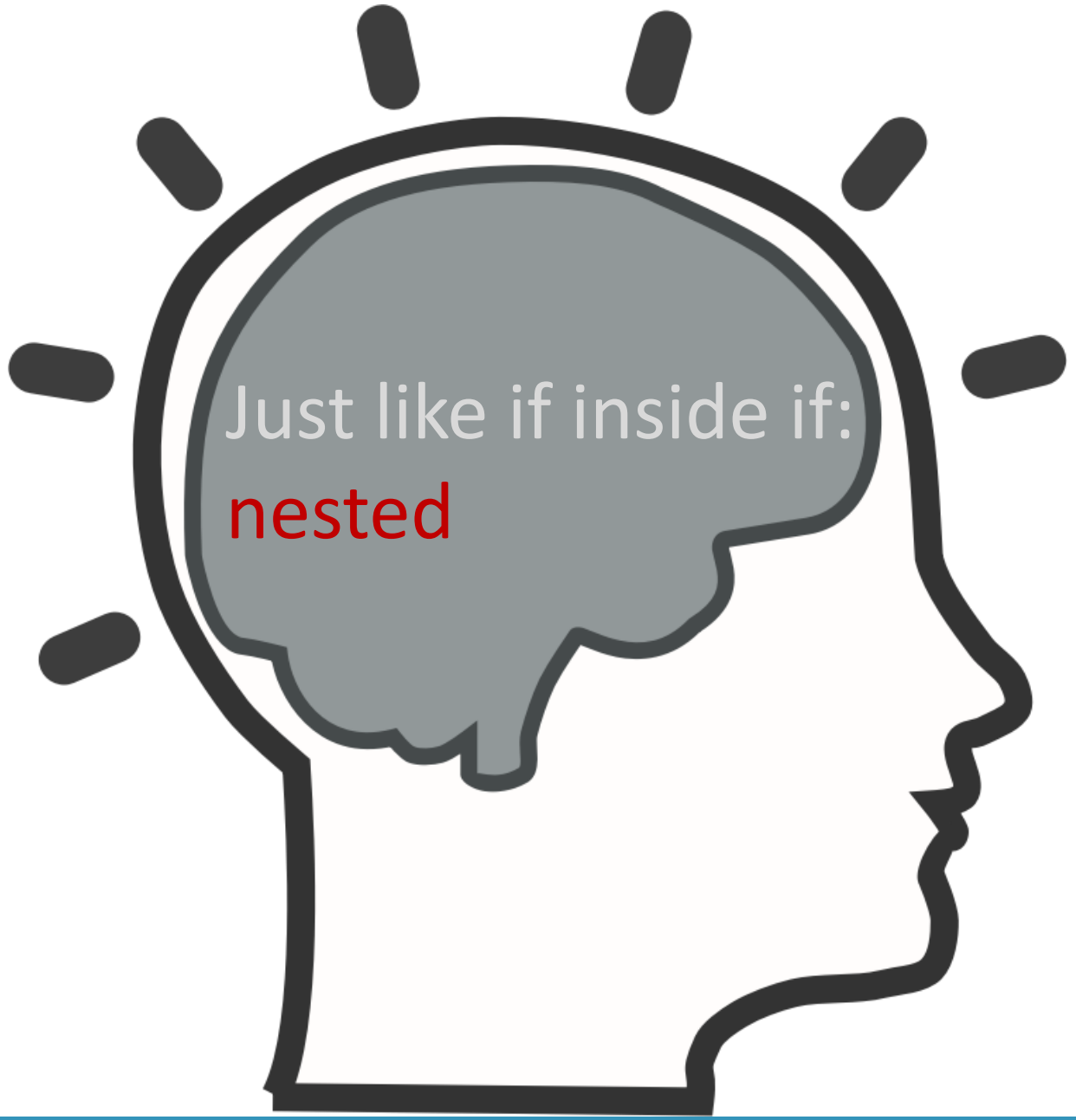
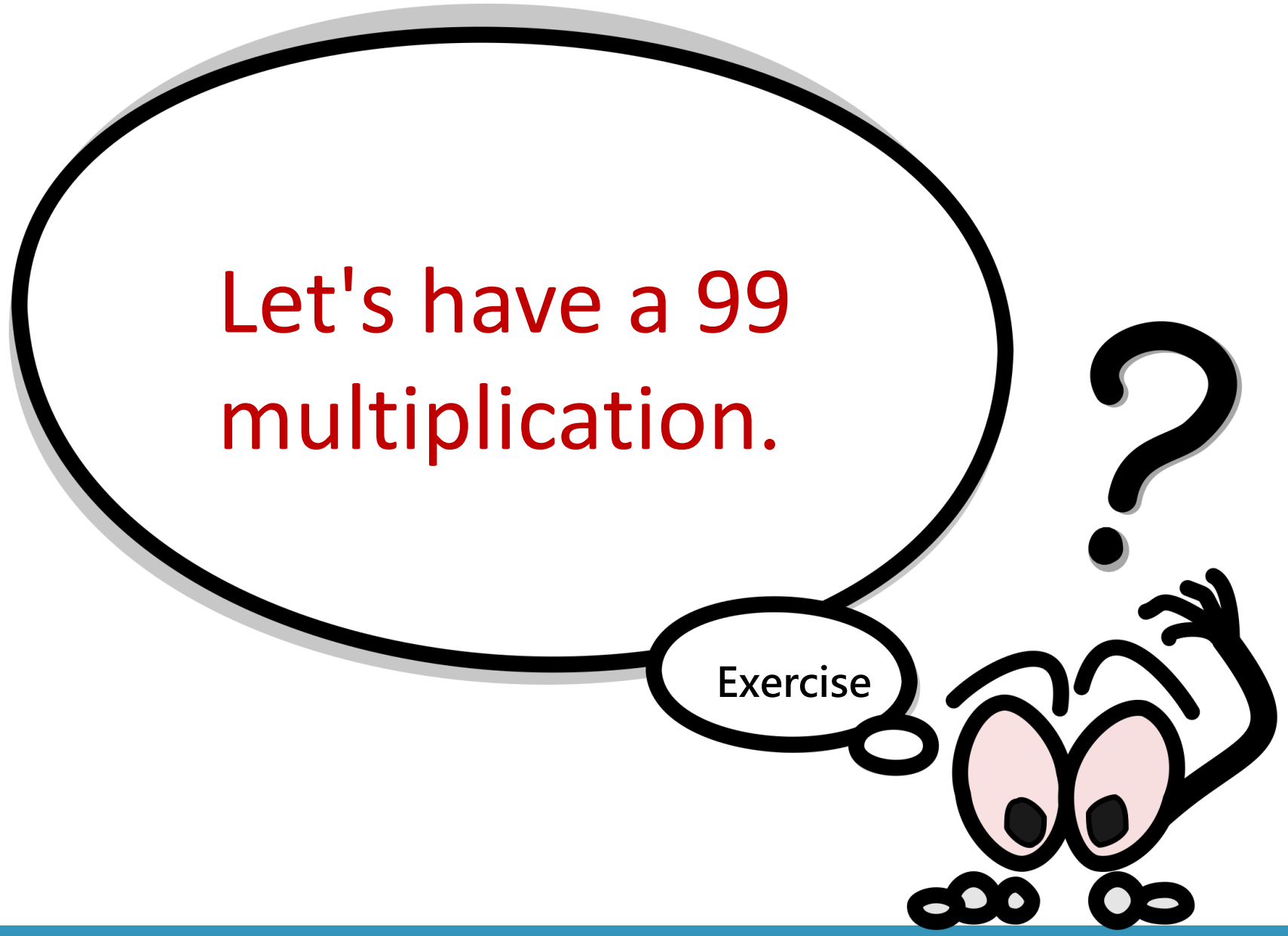
Python

Nested loop


Just like if inside if:
nested

Let's have a 99 multiplication.



Program3 can also write as program4

```
i=1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
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i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
```

Program3

```
for i in range(1,10,1):
    print("1*{0}={1}".format(i,1*i))
```

Program4

Output
1*1=1
1*2=2
1*3=3
1*4=4
1*5=5
1*6=6
1*7=7
1*8=8
1*9=9

Python

solve the problem with python

Please log in to the DICE

Disassemble the multiplication table, starting at 1x9

```
print("1*1=1")
print("1*2=2")
print("1*3=3")
print("1*4=4")
print("1*5=5")
print("1*6=6")
print("1*7=7")
print("1*8=8")
print("1*9=9")
```

Program1

```
print("1*1={0}".format(1*1))
print("1*2={0}".format(1*2))
print("1*3={0}".format(1*3))
print("1*4={0}".format(1*3))
print("1*5={0}".format(1*4))
print("1*6={0}".format(1*5))
print("1*7={0}".format(1*6))
print("1*8={0}".format(1*7))
print("1*9={0}".format(1*8))
```

Program2

```
i=1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
i=i+1
print("1*{0}={1}".format(i,1*i))
```

Program3

Output

```
1*1=1
1*2=2
1*3=3
1*4=4
1*5=5
1*6=6
1*7=7
1*8=8
1*9=9
```

From 1*9 to 9*9

This is inner loop

```
for i in range(1,10,1):
    print("1*{0}={1}".format(i,1*i))
```

Need the outer loop :
Must be shifted from 1 :
Increase 1 each time from 1 to 9.

Nested loop

```
For I in range(1, 10): # The beginning of the outer loop
  for j in range(1, 10): # The beginning of the inner loop
    print("{0}*{1}={2:2d}".format(i, j, i*j), end='\t') # This is
the inner loop area
  print(  ''  ) # This is the outer loop area
```

Run

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

i is used to control outer loop，j is for controlling inner loop

當i=1時，符合外層迴圈的判斷條件(i<10)，進入內層迴圈主體，繼續執行，直至條件不符合再跳回外層迴圈。

One more nested loop

Use a loop to find a multiple of 6 between 1 and N

Please write a program. Print between 1-N the multiple of 6.

This program will only use a loop.

Sample input:

30

Sample output:

6

12

18

24

30

```
1  n=int(input())
2  i=6
3  while i<=n:
4      if i%6==0:
5          print("{0}".format(i))
6      i=i+1
```

The above questions, what if doing 5 times

That's means add a loop on it.

- for c in range (1,6,1):

```
1 n=int(input())
2 i=6
3 while i<=n:
4     if i%6==0:
5         print("{0}".format(i))
6     i=i+1
```