

Lecture 01 & 02 课后习题

Python 101: Microsoft Exam 98-381

James W. Jiang 姜伟生 | Summer 2018, SavvyPro, Toronto, Canada

Question 1. Please point out mistakes in the following sentences if there is any:

```
print("It's a beautiful day in the neighborhood")  
  
print(Hickory Dickory Dock)  
  
print('It's a small world')  
  
print("Hi there")  
  
prnit("Hello World!")
```

Question 2. Please name the types of the following data structures. Please explain the differences between them.

```
str_eg = 'this is a whatever'  
  
fruits = ["apple", "mango", "orange"]  
  
numbers = (1, 2, 3)  
  
alphabets = {'a':'apple', 'b':'ball', 'c':'cat'}  
  
vowels = {'a', 'e', 'i', 'o', 'u'}
```

Question 3. Please explain how the type of the variable a changes in the following block of code.

```
a = 5  
  
print(a, "is of type", type(a))  
  
a = 2.0  
  
print(a, "is of type", type(a))  
  
a = 1+2j  
  
print(a, "is complex number?", isinstance(1+2j,complex))
```

Question 4. Please name the types of the following results from math operations.

```
type(2/1)
type(1+2)
type(2*1)
type(5/2)
type(2/1+1)
type(2/1*1)
type (+1.5e10)
type('6.4')
type(b'6.4')
type(['6.4'])
type(TURE)
type(true)
type(True)
type('True')
```

Question 5. What is the result of the following sentence:

```
a = {1,2,2,3,3,3}
```

Question 6. True or false

```
(1.1 + 2.2) == 3.3
(1.1 + 2.2) is 3.3
```

Question 7. Please show the results from the following operations:

```
True + 1
True + 1.5
True/1
```

```
True * 1  
True + False  
True == 1  
True is 1  
False == 0  
False is 0
```

Question 8. Please show the types of the results.

```
type( True + 1)  
type( True + 1.5)  
type( True/1)  
type( True * 1)  
type( True + False)  
type( True == 1)  
type( True is 1)  
type( False == 0)  
type( False is 0)
```

Question 9. What are the results of following operations?

```
int(3.14)  
float("123")  
int(-3.999)  
str(17)[1]  
str(123.45)[3]
```

Question 10. What is the type of the num_new?

```
num_int = 123
```

```
num_flo = 1.23

num_new = num_int + num_flo

type (num_new)
```

Question 11. Please state which are invalid variable names and why.

```
more$
class
raise
Raise
Yield
45variable
45_variable
Variable_45
Variable 45
```

Question 12. What are differences between the results for the following print functions?

```
print(1,2,3,4)
print(1,2,3,4,sep='*')
print(1,2,3,4,sep='#',end='&')
```

Question 13. True or False

```
isinstance(6,int)
isinstance(6,str)
isinstance('6',str)
isinstance('6',(int,float,bytes))
isinstance('6',(int,float,bytes,str))
isinstance({},dict)
```

```
isinstance({3,4,5},set)

isinstance(b'',str)

isinstance(b'',bytes)
```

Question 14. True or False

```
isinstance(7, int)

isinstance(0, int)

isinstance(-11, int)

isinstance(2, int)

isinstance(5, int)

isinstance(3.14159, int)

isinstance(0.0001, int)

isinstance(11.11111, int)

isinstance(2.0, int)
```

Question 15. Float or Integer

```
8/2

4*4/2

4-4*2

2-4

10+10/2
```

Question 16. What are the values for the binaries?

```
0B11

0B1 + 0B1

0B11 + 0B1

0B10001 + 0B1
```

OB10001 - OB1

Question 17. True or False

```
isinstance(4.5, float)
isinstance(1.25, float)
isinstance(0.75, float)
isinstance(3.14159, float)
isinstance(2.71828, float)
isinstance(1.0, float)
isinstance(271828, float)
isinstance(0, float)
isinstance(0.0, float)
isinstance(0.0, 0e0 )
isinstance(0.0, -3e1 )
isinstance(0.0, 15E-6)
isinstance(0.0, .5E+2 )
isinstance(0.0, -3.00e-5 )
isinstance(0.0, 123_456.75E-5)
isinstance(0.0, 123_123_456.75E-5)
isinstance(0.0, 12345e-4)
```

Question 18. What is the end result of the following program?

```
first = 'boy'
second = 'friend'
(first + second)*4
```

Question 19. True or False

[illegible]

Question 20. What are the converted results?

```
int(1.5)
int(10.0)
int(True)
int(False)
float(102)
float(932)
```

```
float(True)

float(False)

float("101.42")

float("4")
```

Question 21. What are the results?

```
fruit = 'banana'

fruit[:3]

fruit[3:]

fruit[3:3]

fruit[:]

fruit[-1]

fruit[-2]

fruit[:-2]

fruit[-2:]

fruit[:]

fruit[-1]

fruit[-2]

fruit[:-2]

fruit[-2:]

fruit[0:5:2]

fruit[1:5:2]

fruit[0:5:3]

fruit[::-1]

fruit[::-2]
```

Question 22. What are the results of data formatting?

```
pi = 3.141592653589793
```



```
"%f" % pi
"%0f" % pi
"%15f" % pi
"%5.1f" % pi
"%5.3f" % pi
'%s' % 'soup' # default: aligned right
'%6s' % 'soup'
'%-10s' % 'soup' # aligned left
"%d" % 1107
"%5d" % 1107
'%30d' % 1107
'%2d' % 1107
'%5d' % 505
'%-5d' % 505
'%05d'%42
```

Question 23. What are values for the elements indexed?

```
spam = ["h", "e", "l", "l", "o", "!"]
spam[1]
spam[5]
spam[3]
spam[-1]
spam[-3]
spam[-2]
spam[-5]
```

Question 24. What are the sliced copies?

```
spam = [1, 2, 3]
```

```
spam[0:3]
spam[0:]
spam[1:]
spam[:1]
spam[:-1]
spam[:0]
```

Question 25. What are the sliced copies?

```
bacon = ["h", "e", "l", "l", "o", ",", " ", "w", "o", "r", "l", "d", "!"]
bacon[::-1]
bacon[:1]
bacon[:2]
bacon[:-2]
bacon[:-5]
bacon[:7:-2]
```

Question 26. What the final result of b?

```
b = [0,1,2,3,4,5,6]
b[0:0] = [7,8,9] # insert elements at beginning of list.
b[0:2] = [] ; # delete elements at beginning of list.
```

Question 27. What the final result of b?

```
b = [0,1,2,3,4,5,6]
b += [7,8,9] # add elements at end of list.
b[-2:] = [] # delete elements at end of list.
```

Question 28. What is the final result of juice?

```
juice = ["a", "b", "c"]  
  
del juice[1]  
  
del juice[0]  
  
del juice[0]
```

Question 29. True or False

```
a = [1, 2, 3]  
  
b = a  
  
b is a
```

Question 30. True or False

```
a = [81, 82, 83]  
  
b = [81, 82, 83]  
  
a == b  
  
a is b
```

Question 31. True or False

```
a = [81, 82, 83]  
  
b = a[:]          # make a clone using slice  
  
a == b  
  
a is b
```

Question 32. What are the results?

```
("A", "B", "C", "D", "E", "F")[0]  
  
("A", "B", "C", "D", "E", "F")[1]  
  
("A", "B", "C", "D", "E", "F")[-1]  
  
("A", "B", "C", "D", "E", "F")[-2]
```