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12. Problem Set 2

《Python programming》 / Lecturer : Zhiyi Luo (罗志一)

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Determine the following statement is true or false.

(1) Comment statements can be one line or multiple lines.

(2) Lists, tuples, and strings belong to ordered sequences, while dictionaries and collections belong to unordered sequences.

(3) You can use ***if*** as variable name in ***Python***.

(4) The list can be used as the "key" of the dictionary.

(5) Inserting an element to a list using the ***Python*** list method ***insert()*** changes the index of the element after the inserted position in the list.

Determine the following statement is true or false.

(1) It is not possible to install multiple **Python** versions on the same computer.

(2) To concate two strings, you can use **the "&"** operator.

(3) When calling a function, you must strictly follow the order of function parameters in order to pass values correctly.

(4) Expression **"passed the exam"** + **"!"** ***2** . The result is **"passed the exam! "**

(5) In **Python** programs with multiple statements written on one line, you can use the statement separator **"\"**.

(6) Both strings and lists are sequence types.

(7) With ***global*** you can declare variables as global variables, but they are only available inside functions.

Multiple choices

The output of the Python statement x=2; print(type(eval('x'+'/7'))) is _____.
[A]<class 'int'> [B]<class 'float'> [C]<class 'str'> [D] Syntax error

The following program finds the area of a circle based on the input radius, introducing the standard module *math* in the program, the underlined part of the sentence 1) should be filled in _____.

```
1 ) ..... . ... ... .....
2 ) r=eval(input())
3 ) s=m.pi*r*r
4 ) print("The area of the circle is",s)
```

[A] import math as m
[B] import math
[C] from math import pi
[D] from math import pi as m

Execute the statement ***print(max(['abc','XYZ','1234'],key=lambda item:len(item)))***. The output is _____.
[A] abc [B] XYZ
[C] 1234 [D] 4

Multiple choices

Regarding ***try-except***, the following options are correctly described _____.
[A] ***try-except-else*** and ***try-except-finally*** are equivalent in that they catch all types of program errors
[B] The keywords that may be used in exception handling are: ***try, if, else, except, Exception, as***.
[C] ***try-except***t is irreplaceable in the program
[D] ***try-except*** is usually used to check the legitimacy of user input, the success of file opening or network acquisition, etc.

The value of the list ***[i for i in range(12) if i%4==0]*** is _____.
[A] [4, 8] [B] [0, 4, 8] [C] [4, 8, 12] [D] [0, 4, 8, 12]

Program comprehension

```
s=0
inp1=[int(x) for x in input().split()]
for item in inp1:
    if item>20:
        break   #continue
    s+=item
print(s)
```

When the program is run, input ***12 18 24 10***, the output is _____.

[A] 12 [B] 30 [C] 54 [D] 64

If you change ***break*** to ***continue*** in the code and enter ***12 18 24 10***, the output is _____.

[A] 12 [B]30 [C] 54 [D] 40

Read the program and write the displaying results.

1、According to the monthly consumption amount, the annual consumption index ***csi*** of students in a school should be calculated as follows: csi= the highest monthly consumption amount * 0.3 + the lowest monthly consumption amount * 0.25 + the average monthly consumption amount of the remaining 10 months * 0.45. Input requirements: Enter the consumption amount of 4 months in each line and input ***enter***, and separate each amount by a comma ***(,)*** until all 12 months of data are entered. Output requirements: "csi index is: XX.X" (quotation marks themselves are not required, keep 1 decimal place).
Example input format is as follows.

```
1203, 1456.9, 1100, 1234.1
989.3, 1500, 1451.4, 998.7
1784.5 1652, 1400, 1234.6
```