Mastering Python

الدرس # 11_2

Tips And Tricks

الارشادات والحيل

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Tips and Tricks?

Python : **Brevity** and **High Readability**

In this Python lesson , we'll cover many essential Python tips and tricks that will authenticate the Python's brevity and high readability

We will cover top **50 Python Tips and Tricks** Every Developer Should Know

Assigning Variables

```python
a, b, c = 1, 2, 3
print ('\n',a, b, c)

a, b, c = [1, 2, 3]
print ('\n',a, b, c)

a, b, c = [1, (2, 3), 4]
print ('\n',a, b, c)

a, (b, c), d = [1, (2, 3), 4]
print ('\n',a, b, c, d)

a, b, c = (2 * i for i in range(3))
print ('\n',a, b, c)

a, *b, c = [1, 2, 3, 4, 5]
print ('\n',a, b, c)

a, b = 1, 2
a, b = b, a
print ('\n',a, b)
```

Output

```
1 2 3

1 2 3

1 (2, 3) 4

1 2 3 4

0 2 4

1 [2, 3, 4] 5

2 1
```

Printing

1

```
1 name='hussam'
2 age = 47
3
4 print ('My name  is :{} and my age is {}'.format(name, age))
5
6 print(f"My name  is :{name} and my age is {age}")
```

Output

```
In [23]: runfile('C:/Python36/Mystuff/
My name  is :hussam and my age is 47
My name  is :hussam and my age is 47

In [24]:
```

2

```
1 multiStr = "select * from multi_row \
2 where row_id < 5"
3 print(multiStr)
4
5 multiStr2 = """select * from multi_row
6 where row_id < 5"""
7 print(multiStr2)
8
9 multiStr3= ("select * from multi_row "
10 "where row_id < 5 "
11 "order by age")
12 print(multiStr3)
```

Output

```
In [24]: runfile('C:/Python36/Mystuff/t_printing_1.py',
select * from multi_row where row_id < 5
select * from multi_row
where row_id < 5
select * from multi_row where row_id < 5 order by age

In [25]:
```

3

```
In [36]: 2 + 3 + 10
Out[36]: 15

In [37]: _
Out[37]: 15

In [38]: print(_)
15
```

The "_" references to the output of the last executed expression.

Lists

```
1  a = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
2  print('\n',a[-1],a[-3])
3
4  a = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
5  print('\n',a[2:8])
6
7  a = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
8  print('\n',a[-4:-2])
9
10 a = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
11 print('\n', a[::2])
12
13 a = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
14 print('\n',a[::-1])
15 print('\n',a[::-2])
16
17 a = [1, 2, 3, 4, 5]
18 a[2:3] = [0, 0]
19 print('\n',a)
```

Output

```
10 8


[2, 3, 4, 5, 6, 7]


[7, 8]


[0, 2, 4, 6, 8, 10]


[10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0]
[10, 8, 6, 4, 2, 0]



[1, 2, 0, 0, 4, 5]
```

Find The Most Frequent Value In A List.

```
1  test = [1, 2, 3, 4, 2, 2, 3, 1, 4, 4, 4]
2  print(max(set(test), key = test.count))
```

```
4
```

Permutations التباديل

```python
import itertools

for p in itertools.permutations([1, 2, 3, 4]):
    print (p,"  >  ", ''.join(str(x) for x in p))


```

Output

```
In [39]: runfile( C:/Python36/Mystuff/t_p
(1, 2, 3, 4)   >   1234
(1, 2, 4, 3)   >   1243
(1, 3, 2, 4)   >   1324
(1, 3, 4, 2)   >   1342
(1, 4, 2, 3)   >   1423
(1, 4, 3, 2)   >   1432
(2, 1, 3, 4)   >   2134
(2, 1, 4, 3)   >   2143
(2, 3, 1, 4)   >   2314
(2, 3, 4, 1)   >   2341
(2, 4, 1, 3)   >   2413
(2, 4, 3, 1)   >   2431
(3, 1, 2, 4)   >   3124
(3, 1, 4, 2)   >   3142
(3, 2, 1, 4)   >   3214
(3, 2, 4, 1)   >   3241
(3, 4, 1, 2)   >   3412
(3, 4, 2, 1)   >   3421
(4, 1, 2, 3)   >   4123
(4, 1, 3, 2)   >   4132
(4, 2, 1, 3)   >   4213
(4, 2, 3, 1)   >   4231
(4, 3, 1, 2)   >   4312
(4, 3, 2, 1)   >   4321
```

```python
import itertools
x =  list(itertools.permutations('ab'))
print(x)
```

Output

```
In [64]: runfile('C:/Users/
[('a', 'b'), ('b', 'a')]
```

enumeration

```
1 testlist = [10, 20, 30]
2 for i, value in enumerate(testlist):
3     print(i, ': ', value)
4
```

Output

```
In [46]: runfile(
0 :  10
1 :  20
2 :  30
```

```
1
2 print ( list(enumerate('abc')) )
3
4 print ( list(enumerate('abc',1)) )
```

Output

```
In [54]: runfile('C:/Users/hhoura
[(0, 'a'), (1, 'b'), (2, 'c')]
[(1, 'a'), (2, 'b'), (3, 'c')]
```

```
1
2 Circle, Square, Triangle, Quadrangle = range(4)
3
4 print(Circle)
5 print(Square)
6 print(Triangle)
7 print(Quadrangle)
8
```

Output

```
In [47]: runfile(
0
1
2
3

In [48]:
```

Master in Software Engineering

Hussam Hourani has over 25 years of Organizations Transformation, VROs, PMO, Large Scale and Enterprise Programs Global Delivery, Leadership, Business Development and Management Consulting. His client experience is wide ranging across many sectors but focuses on Performance Enhancement, Transformation, Enterprise Program Management, Artificial Intelligence and Data Science.