

# python基础语法二

原创

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阅读数 93

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编辑 展开

## 函数

```
1 def    say_hello():
2     # 该块属于这一函数
3     print('hello        world')
4     # 函数结束
5 say_hello()    #调用函数
6 say_hello()    #再次调用函数
```

## 函数参数

```
1 def    print_max(a,b):
2     if a > b:
3         print(a,'is maximum')
4     elif a == b:
5         print(a, 'is equal to', b)
6     else:
7         print(b, 'is maximum')
8 # 直接传递字面值 print_max(3, 4)
9 x = 5
10 y = 7
11 # 以参数的形式传递变量
12 print_max(x,y)
```

## 局部变量

```
1 x = 50
2 def    func(x):
3     print('x is', x)
4     x = 2
5     print('Changed local x to', x)
6 func(x)
7 print('x        is        still', x)
```

结果：

```
1 $ python function_local.py
2 x is 50
3 Changed local x to      2
4 x is still 50
```

## global 语句

```
1 x = 50
2 def    func():
3     global    x
4     print('x is', x)
5 x = 2
6 print('Changed global x to', x)
7
8
```

```
func()
print('Value of x is', x)
```

结果：

```
1 $ python function_global.py
2 x is 50
3 Changed global x to 2
4 Value of x is 2
```

#### 默认参数值

```
1 def say(message, times=1):
2     print(message * times)
3 say('Hello')
4 say('World', 5)
```

结果

```
1 $ python function_default.py
2 Hello World
3 WorldWorldWorldWorld
4
```

#### 关键字参数

```
1 def func(a, b=5, c=10):
2     print('a is', a, 'and b is', b, 'and c is', c)
3 func(3, 7)
4 func(25, c=24)
5 func(c=50, a=100)
6
```

结果：

```
1 $ python function_keyword.py
2 a is 3 and b is 7 and c is 10
3 a is 25 and b is 5 and c is 24
4 a is 100 and b is 5 and c is 50
```

#### 可变参数

```
1 def total(a=5, *numbers, **phonebook):
2     print('a', a)
3     #遍历元组中的所有项目
4     for single_item in numbers:
5         print('single_item', single_item)
6         #遍历字典中的所有项目
7         for first_part, second_part in phonebook.items():
8             print(first_part, second_part)
9     print(total(10, 1, 2, 3, Jack=1123, John=2231, Inge=1560))
10
```

结果：

```

1 | $ python function_varargs.py
2 | a 10
3 | single_item 1
4 | single_item 2
5 | single_item 3
6 | Jack 1123
7 | John 2231
8 | Inge 1560
9 | None

```

## return 语句

```

1 | def maximum(x, y):
2 |     if x > y:
3 |         return x
4 |     elif x == y:
5 |         return 'The numbers are equal'
6 |     else:
7 |         return y
8 | print(maximum(2, 3))
9 |

```

## DocStrings

```

1 | def print_max(x, y):
2 |     #第一行以某一大写字母开始，以句号结束。第二行为空，后跟的第三行开始时任何详细的解释说明
3 |     '''打印两个数值中的最大数。'''
4 |
5 |     这两个数都应该是整数'''
6 |     # 如果可能，将其转换至整数类型
7 |     x = int(x)
8 |     y = int(y)
9 |     if x > y:
10 |         print(x, 'is maximum')
11 |     else:
12 |         print(y, 'is maximum')
13 |
14 |
15 | print_max(3, 5)
16 | print(print_max.__doc__)

```

## 结果

```

1 | 5 is maximum
2 | 打印两个数值中的最大数。
3 |
4 |     这两个数都应该是整数

```

该文档字符串所约定的是一串多行字符串，其中第一行以某一大写字母开始，以句号结束。第二行为空行，后跟的第三行开始是任何详细的解释说明。在此强烈建议你在你所有重要功能的所有文档字符串中都遵循这一约定。

## 模块

```

1 | import sys
2 |
3 | print('The command line arguments are:')
4 | for i in sys.argv:
5 |     print(i)

```

```
6 print('\n\nThe PYTHONPATH is', sys.path, '\n')
7
```

## 结果

```
1 The command line arguments are:
2 C:/Users/shenyonghui/PycharmProjects/untitled1/venv/module_using_sys.py
3
4
5 The PYTHONPATH is ['C:\\Users\\shenyonghui\\PycharmProjects\\untitled1\\venv', 'C:\\Users\\shenyonghui\\PycharmProjects\\unti
6
```

## from...import 语句

```
1 | from math import sqrt
2 | print("Square root of 16 is", sqrt(16))
```

模块的 name

```
1 if __name__ == '__main__':
2     print('This program is being run by itself')
3 else:
4     print('I am being imported from another module')
5
```