



链滴

Python 3.x 中 maketrans 和 translate 用法

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1.

1. maketrans()用法

2.

3. 语法: str.maketrans(intab, outtab);

4.

5. Python maketrans() 方法用于创建字符映射的转换表, 对于接受两个参数的最简单的调用方式,

6. 第一个参数是字符串, 表示需要转换的字符, 第二个参数也是字符串表示转换的目标。

7. 注: 两个字符串的长度必须相同, 为一一对应的关系。

8.

9. Python3.4已经没有string.maketrans()了, 取而代之的是内建函数:

10. bytearray.maketrans()、bytes.maketrans()、str.maketrans()

11. """

12.

13. intab = "abcd"

14. outtab = "1234"

15. str_trantab = str.maketrans(intab,outtab)

16.

17. test_str = "csdn blog: <http://blog.csdn.net/wirelessqa>"

18.

19. print (test_str.translate(str_trantab)) # 3s4n 2log: <http://2log.3s4n.net/wirelessq1>

20.

21.

22.

23. """

24.

25.

2. translate() 用法

26.

27. 根据参数table给出的表(包含 256 个字符)转换字符串的字符, 要过滤掉的字符放到 del 参数中。

28.

29. 语法:

30. str.translate(table[, deletechars]);

31. bytes.translate(table[, delete])

32. bytearray.translate(table[, delete])

33.

34. 若给出了delete参数, 则将原来的bytes中的属于delete的字符删除, 剩下的字符要按照table中

出的映射来进行映射

```
35. ""  
36.  
37.
```

若table参数为None，则只删除不映射

```
38. print(b'    http://www.csdn.net/wirelessqa'.translate(None, b'ts')) #b'hp://www.cdn.ne/wi  
eleqa'  
39.  
40.
```

若table参数不为NONE，则先删除再映射

```
41. bytes_tabtrans = bytes.maketrans(b'abcdefghijklmnopqrstuvwxy', b'ABCDEFGHIJKLMNO  
QRSTUVWXYZ')  
42. print(b'    http://www.csdn.net/wirelessqa'.translate(bytes_tabtrans, b'ts')) #b'HP://WWW  
CDN.NE/WIRELEQA'  
43.  
44.  
45. ""  
46.
```

3. 闭包: 它是个内层函数,由一个变量来指代,而这个变量对于外层包含它的函数来说是本地变量

```
47.  
48. ""  
49. def make_adder(addend):  
50.
```

```
    def adder(augend): #adder为内层函数
```

```
51.  
  
    return augend + addend  
52.
```

```
    return adder
```

```
53.  
54. a = make_adder(1) #产生一个闭包,addend为1,注意return的是adder  
55. b = make_adder(2) #产生另一个闭包,addend为2,注意return的是adder  
56. print (a(100), b(100)) #a(100)就相当于adder(100),adden之前为1,因此返回100+1  
57.
```

58. """

59.

4. 对translate方法的简单封装,使用起来更加方便

60. frm : intab

61. to : outtab

62. delete : 指定删除字符

63. keep: 指定保留字符

64. delete和keep有重叠时, delete优先

65. """

66. def my_translator(frm = b'', to = b'', delete = b'', keep = None):

67.

68.

if len(to) == 1:

69.

to = to * len(frm) #如果to只有一个字符,将字符的数量跟frm相等,这样才能一一对应

70.

71.

#构建一个映射表

72.

trans = bytes.maketrans(frm, to)

73.

74.

if keep is not None: #如果有保留字

75.

allchars = bytes.maketrans(b'', b'') # 获取空映射表的所有字符

76.

keep = keep.translate(allchars, delete) # 从keep中去除delete中包含的字符, 即keep与delete有重合时, 优先考虑delete

77.

```
delete = allchars.translate(allchars, keep) # delete为从全体字符中除去keep, 即不在keep的删掉
```

```
78.
```

```
79.
```

```
80.
```

```
# 闭包
```

```
81.
```

```
def my_translate(s):
```

```
82.
```

```
    return s.translate(trans, delete)
```

```
83.
```

```
84.
```

```
    return my_translate
```

```
85.
```

```
86.
```

```
87.
```

测试my_tranlator

```
88.
```

```
89.
```

只保留数字

```
90. digits_only = my_translator(keep = b'0123456789')
```

```
91. print(digits_only(b' http://www.csdn.net/wirelessqa 520520')) #b'520520'
```

```
92.
```

```
93.
```

删除所有数字

```
94. no_digits = my_translator(delete = b'0123456789')
```

```
95. print(no_digits(b' http://www.csdn.net/wirelessqa 520520')) #b'http://www.csdn.net/wirelessqa'
```

```
96.
```

```
97.
```

用*替换数字

```
98. digits_to_hash = my_translator(frm = b'0123456789', to = b'*)
99. print(digits_to_hash(b'    http://www.csdn.net/wirelessqa 520520')) #b'http://www.csdn.n
t/wirelessqa *****'
100.
101.
```

delete与keep有重合时的情况

```
102. trans = my_translator(delete = b'20', keep = b'0123456789')
103. print(trans(b'    http://www.csdn.net/wirelessqa 520520')) # b'55'
```