

python 从入门到实践 ch6 字典词典

```
在 [1] ... alien_0 = {'color':'green','points':5}

print(alien_0['color'])
print(alien_0['points']) # 打印字典值
```

```
green
5
```

```
在 [2] ... alien_0 # 打印全字典
```

```
出[2]: {'color': 'green', 'points': 5}
```

```
在 [5] ... new_points = alien_0['points']

print(f'You just earned {new_points} points!') # 字典不能直接 f{}
```

```
You just earned 5 points!
```

```
在 [7] ... alien_0['x_position'] = 0
alien_0['y_position'] = 25

print(alien_0) # 添加·键值对
```

```
{'color': 'green', 'points': 5, 'x_position': 0, 'y_position': 25}
```

```
在 [ ] ...
```

```
在[8]中: alien_0 = {} # 先建一个空字典

alien_0['color'] = 'green'
alien_0['points'] = 5

print(alien_0)
```

```
{'color': 'green', 'points': 5}
```

```
在 [9] ... alien_0['color'] = 'yellow'

print(alien_0) # 更改元素的值
```

```
{'color': 'yellow', 'points': 5}
```

```
在[12]中... alien_0 = {'x_position':0,'y_position':25,'x_speed':'medium'}
print(f"Original x_position is {alien_0['x_position']}")

if alien_0['x_speed'] == 'slow':
    x_increment = 1
elif alien_0['x_speed'] == 'medium':
    x_increment = 2
elif alien_0['x_speed'] == 'fast':
    x_increment = 3

alien_0['x_position'] = alien_0['x_position'] + x_increment
print(f"Now x_position is {alien_0['x_position']}")
```

Original x_position is 0
Now x_position is 2

在[13]中...

```
alien_0 = {'color':'green','points':5}

del alien_0['color'] # 删除键值对
alien_0
```

出[13]: {'points': 5}

在[15]中...

```
favorite_languages = {'mum':'c',
                      'dad':'java',
                      'me':'python',
                      } # 换行

print(f"My favorite language is {favorite_languages['me']}!")
```

My favorite language is python!

在[16]中...

```
alien_0 = {'color':'green',}

print(alien_0['points']) # 强行输出不存在的键值对会报错
```

```
-----
KeyError                                Traceback (most recent call last)
Cell In[16], line 3
      1 alien_0 = {'color':'green',}
----> 3 print(alien_0['points'])

KeyError: 'points'
```

在[20]中...

```
alien_0 = {'color':'green',}

point_value = alien_0.get('points','No point value assigned') # get方法避免报错
print(point_value)
```

No point value assigned

在[22]中...

```
user_0 = {'username':'efermi',
          'first_name':'enrico',
          'last_name':'fermi'}

for key,value in user_0.items():
    print(f'\nKey:{key}.')
    print(f'Value:{value}.')
```

Key:username.
Value:efermi.

Key:first_name.
Value:enrico.

Key:last_name.
Value:fermi.

In [24]:

```
for name,language in favorite_languages.items():
    print(f"{name.title()}'s favorite language is {language}!")
```

Mum's favorite language is c!
Dad's favorite language is java!
Me's favorite language is python!

```
In [25]: for name in favorite_languages.keys():  
         print(f'{name}\n')
```

mum

dad

me

```
In [26]: for name in favorite_languages:  
         print(f'{name}\n')
```

mum

dad

me

```
In [27]: for language in favorite_languages.values():  
         print(f'{language}\n')
```

c

java

python

```
In [31]: I = ['me']  
  
         for name in favorite_languages.keys():  
             print(f'Hi,{name.title()}.')  
  
             if name in I:  
                 language = favorite_languages[name]  
                 print(f'{name.title()},oh,I love {language}!') # 神气  
  
         if 'grandpa' not in favorite_languages.keys():  
             print(f'Grandpa,please take the poll~')
```

Hi,Mum.

Hi,Dad.

Hi,Me.

Me,oh,I love python!

Grandpa,please take the poll~

```
In [32]: for name in sorted(favorite_languages.keys()):  
         print(f'{name.title()},thank you for taking the poll!')
```

Dad,thank you for taking the poll!

Me,thank you for taking the poll!

Mum,thank you for taking the poll!

```
In [33]: print('The follow languages have been motioned:')  
  
         for language in favorite_languages.values():  
             print(f'{language.title()}')
```

The follow languages have been motioned:

C

Java

Python

```
In [34]: for language in set(favorite_languages.values()): # 集合
         print(f'{language.title()}')
```

Python

Java

C

```
In [36]: languages = {'c', 'python', 'java'}
         languages # 集合 独一无二的元素
```

```
Out[36]: {'c', 'java', 'python'}
```

```
In [37]: alien_0 = {'color': 'green', 'points': 5}
         alien_1 = {'color': 'yellow', 'points': 10}
         alien_2 = {'color': 'red', 'points': 15}

         alien = [alien_0, alien_1, alien_2]
         print(alien)
```

```
[{'color': 'green', 'points': 5}, {'color': 'yellow', 'points': 10}, {'color': 'red', 'points': 15}]
```

```
In [41]: aliens = []

         for alien_num in range(30):
             new_alien = {'color': 'green', 'points': 5, 'speed': 'slow'}
             aliens.append(new_alien)

         for alien in aliens[:5]: # 打印前5个字典
             print(f'{alien}\n')
         print('...')

         print(f'There are {len(aliens)} alien in lists!') # 有意思
```

```
{'color': 'green', 'points': 5, 'speed': 'slow'}
```

```
{'color': 'green', 'points': 5, 'speed': 'slow'}
```

```
{'color': 'green', 'points': 5, 'speed': 'slow'}
```

```
{'color': 'green', 'points': 5, 'speed': 'slow'}
```

```
{'color': 'green', 'points': 5, 'speed': 'slow'}
```

```
...
```

```
There are 30 alien in lists!
```

```
In [42]: for alien in aliens[:3]:
         if alien['color'] == 'green':
             alien['color'] = 'yellow'
             alien['points'] = 10
             alien['speed'] = 'medium'

         for alien in aliens[:5]:
             print(alien)
         print('...')
```

```
{'color': 'yellow', 'points': 10, 'speed': 'medium'}
{'color': 'yellow', 'points': 10, 'speed': 'medium'}
{'color': 'yellow', 'points': 10, 'speed': 'medium'}
{'color': 'green', 'points': 5, 'speed': 'slow'}
{'color': 'green', 'points': 5, 'speed': 'slow'}
...
```

```
In [43]: pizza = {'crust':'thick',
                  'toppings':['mushrooms','extra cheese'],}

print(f"You ordered a {pizza['crust']}-crust pizza:")
print("With those toppings:")
for topping in pizza['toppings']:
    print(f"{topping}\t")
```

You ordered a thick-crust pizza:
With those toppings:
mushrooms
extra cheese

```
In [48]: users = {'zhangsan':{'first_name':'san',
                              'last_name':'zhang',
                              'location':'beijing'},
                  'lisi':{'first_name':'si',
                          'last_name':'li',
                          'location':'shanghai'}
          }

for user_name,user_info in users.items():
    print(f"{user_name.title()}'s informations:")
    print(f"First name:{user_info['first_name']}")
    print(f>Last name:{user_info['last_name']}")
    print(f"Location:{user_info['location']}\n")
```

Zhangsan's informations:
First name:san
Last name:zhang
Location:beijing

Lisi's informations:
First name:si
Last name:li
Location:shanghai

In []:

In []:

In []: