



中國人民大學
RENMIN UNIVERSITY OF CHINA

第1編 Python語法基礎

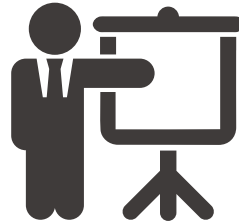
第2講 控制語句

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01. If语句

if-introduction

- 有if, elif, else三种
 - elif, else两者可有可无
- 书写格式

if <test1>:

#if 测试

<statements1>

#关联的区段

elif <test2>:

#可有可无的elif

<statements2>

else:

#可有可无的else

<statements3>

例子

```
if len(item_list[0])<6:
```

```
    item_list[0]="0"*(6-len(item_list[0]))+item_list[0]
```

```
    if type==1:
```

```
        FUND_TYPE = {'hh': u'混合型',  
                      'gp': u'股票型',  
                      'zq': u'债券型',  
                      'zs': u'指数型',  
                      'qdii': u'QDII型',  
                      'lof': u'LOF型',  
                      'fof': u'FOF型' },
```

```
    else:
```

```
        FUND_TYPE = {'hh': u'混合型',  
                      'gp': u'股票型',  
                      'zq': u'债券型',  
                      'zs': u'指数型',}
```

if-一些范例

```
if 1:  
    print ("true")
```

```
if not 1:  
    print ("true")  
else:  
    print ("false")
```

elif的出现

```
x = "Bill"  
if x == "John":  
    print ("Fine")  
elif x == "David":  
    print ("OK")  
else:  
    print ("Run!")
```

if 0:

```
print("合并后B: ")
print(df.columns)
print(df)
df["YYY"] = df["份数YU"].mul(df["最新净值"])
print(df["份数YU"])
print(df["YYY"].sum())
```

if 1:

```
my_file = os.path.abspath('.')+"\\'+my_fund.xlsx'
my_fund_pd, mycodes, my_code_name = get_myfund_pd(my_file)
my_fund_num = len(my_fund_pd) # search_myfund () 有用到
if auto_fill_fund_price_number:
    trans_price_to_myfund(my_file) #填写myfund.exls 中交易价格和份数
```

多种分支

- Python里面没有case
- 可以用if, elif, else取代

```
choice = "ham"
if choice == "spam":
    print (1.25)
elif choice == "bacon":
    print (1.10)
elif choice == "eggs":
    print (0.99)
elif choice == "ham":
    print (1.99)
else:
    print ("Bad choice")
```

可以用字典取代

```
A={"spam": 1.25,
    "bacon":1.10,
    "eggs": 0.99,
    "ham": 1.99}
```

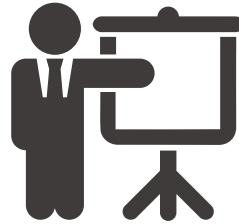
```
choice = "ham"
print (A[choice])
```

巢状的区段程序代码





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02. While语句

While循环-Introduction

■ 书写格式

- **while** <test>: #循环测试
- <statements1> #循环主体
- **else:** #可有可无的else
- <statements2> #如果没有用break跳离

```
➤ count = 0  
while count < 5:  
    print (count, " is less than 5")  
    count = count + 1  
else:  
    print (count, " is not less than 5")
```

while循环-一些范例

```
x = "ABCD"
```

```
while x:
```

```
    print (x)
```

```
    x = x[1:]
```

```
a = 0; b = 10
```

```
while a < b:
```

```
    print (a)
```

```
    a = a + 1
```

while循环-break, continue, pass, else

while <test>:

<statements>

if <test> : **break** #跳离循环, 略过 else

if <test> : **continue** #回到循环的顶端

<statements> #continue判断式若成立, 就不执行

else:

<statements> #没用到break跳出, 就会执行

例子

```
for i in range(1, 10):  
    if i == 5:  
        break  
    print(i)
```

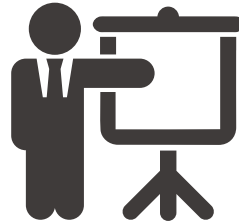
```
s = 0  
while True:  
    n = input('请输入一个数: ')  
    if not n:  
        break  
    s += int(n)  
print(s)
```

```
i = 1  
while i <= 10:  
    if i == 5:  
        i += 1  
        continue  
    print(i, end=' ')  
    i += 1  
else:  
    print("i=%d"%i)
```

```
people = person()
people.read()
while True:
    try:
        choice = int(input('请输入相应数字操作'))
        if choice==1:
            people.add()
        elif choice ==2:
            people.dele()
        elif choice ==3:
            people.modify()
        elif choice ==4:
            people.search()
        elif choice ==5:
            people.write()
            break
        elif choice==6:
            people.show()
        else:
            print('输入不合法，请输入合法数字')
    except ValueError:
        print('请输入数字选项')
```



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03. For语句

for循环-Introduction

■ 书写格式

for <target> **in** <object>: #赋值object给target

 <statements>

 if <test>: **break** #跳离循环

 if <test>: **continue** #回到循环顶端

 <statements> # continue判断式成立, 就不执行

else: #如果没break, 就会执行

 <statements>

■ 循环运算

➤ 停止条件: 所有**序列内的对象**都循序跑过一次

➤ object内的对象一定要是序列型态(string, list, tuple)

for循环-一些范例

累加器

```
sum = 0
for x in [1, 2, 3, 4]:
    sum = sum + x

Sum
```

累乘器

```
prod = 1
for x in [1, 2, 3, 4]:
    prod = prod * x

Prod
```

```
S, T = "ABCD", ("I", "am")
for x in S: print (x)

for x in T: print (x)
```

```
T = [(1, 2), (3, 4)]
for (a, b) in T:
    print (a, b)
```

```

for code in all_codes[start_code:end_code]:
    i = i+1
    file=u'data/{}.xlsx'.format(code)

    if os.path.exists(file):
        data = pd.read_excel(file, encoding='gbk')
        old_df = data.copy()
        old_date = old_df.iloc[-1, 0]
        new_df = get_fund_price_data(code, per=49, sdate=old_date, edate=today)
        if len(new_df) != 0:
            data = pd.concat([old_df, new_df], axis=0)
            data = data.drop_duplicates(subset=['净值日期'])
            data.to_excel(file, index=False, encoding='gbk')
            print("[%d]"%i, code, data.shape,"updated done !")

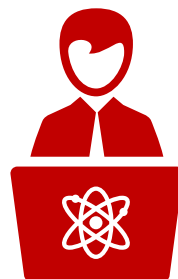
        else:
            old_df.to_excel(file, index=False, encoding='gbk')
            print("[%d]"%i, code, data.shape,"is new, not update !")

    else:
        today = datetime.now().strftime('%Y-%m-%d')
        data = get_fund_price_data(code, per=49, sdate='1000-03-01', edate=today)
        data.to_excel(file, index=False, encoding='gbk')
        print("[%d]"%i, code, data.shape,"first to crawl done !")

```



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谢谢大家!

