

03-XB

列表

Python列表

邓俊辉

PYTHON = Programmers Yearning To Homestead Our Noosphere.

deng@tsinghua.edu.cn

# 声明 + 倒置 + 排序

❖ 在Python中, List属于内置的标准数据类型

❖ `box = [ 'pencil', 'pen', 'ruler', 'eraser' ]; print box`

`# ['pencil', 'pen', 'ruler', 'eraser']`

❖ `for item in box: print item,`

`# pencil pen ruler eraser`

❖ `box.reverse()`

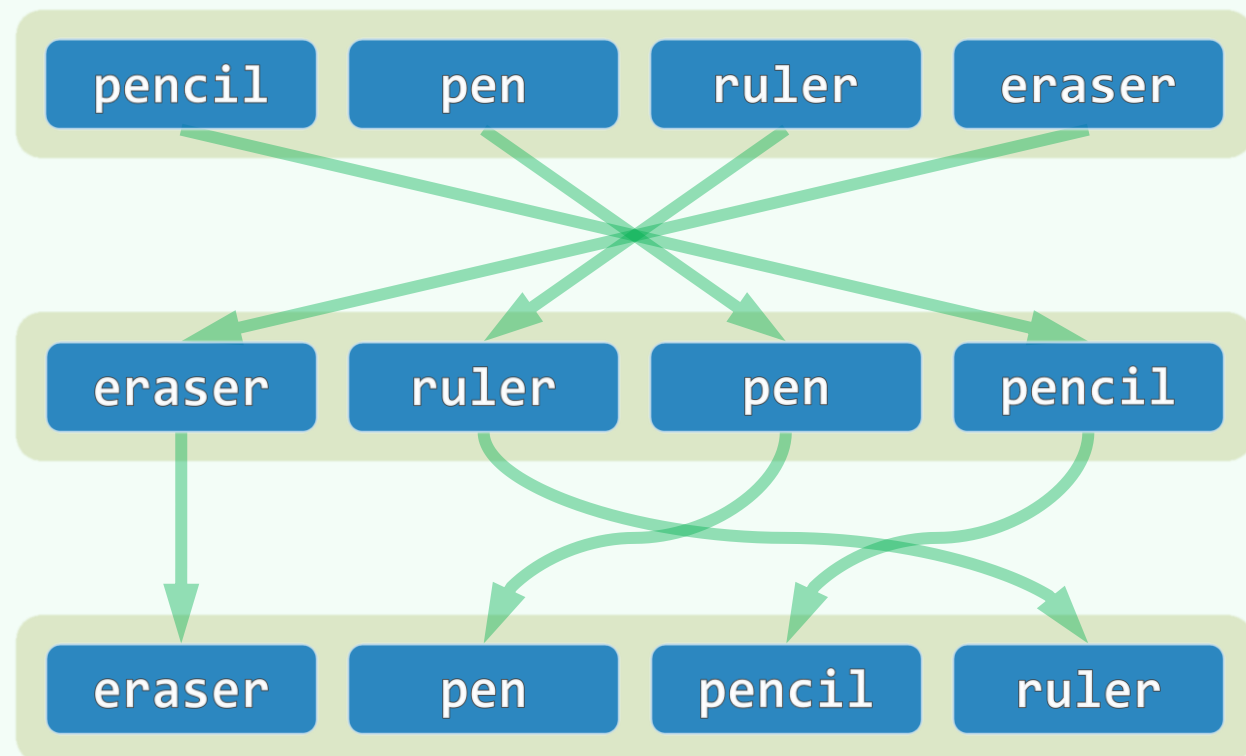
`for item in box: print item,`

`# eraser ruler pen pencil`

❖ `box.sort()`

`for item in box: print item,`

`# eraser pen pencil ruler`



# 区间遍历

❖ `for i in range(0, len(box)): # [0, n)`

`print box[i],`

`# eraser pen pencil ruler`

❖ `for i in range(len(box)-1, -1, -1): # [n-1, -1)`

`print box[i],`

`# ruler pencil pen eraser`

❖ `for i in range(-1, -len(box)-1, -1): # [-1, -n-1)`

`print box[i],`

`# ruler pencil pen eraser`

eraser

pen

pencil

ruler

# 集合遍历

❖ `bag = [ 'data structures', 'calculus', box, 2012012012 ]`

`print bag`

`# ['data structures', 'calculus',  
['eraser', 'pen', 'pencil', 'ruler'], 2012012012]`

❖ `for item in bag: print item,`

`# data structures calculus`

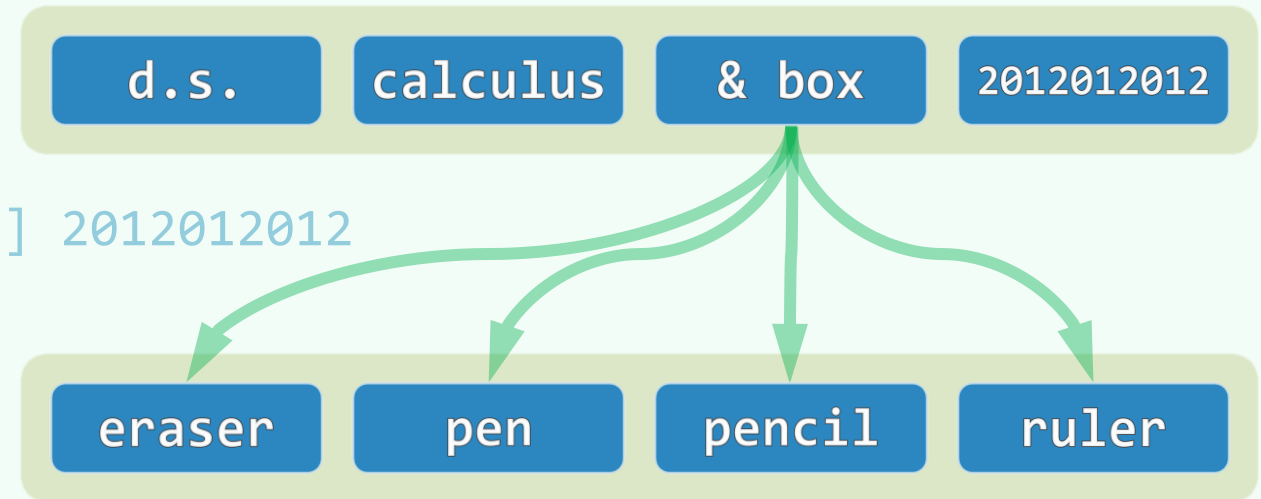
`['eraser', 'pen', 'pencil', 'ruler'] 2012012012`

❖ `for item in bag[2]: print item,`

`# eraser pen pencil ruler`

❖ `for item in bag[2][1:3]: print item,`

`# pen pencil`



## reverse(): 秩 + 位置

```
def reverse_1(L): # 循秩访问?
```

```
    lo, hi = 0, len(L) - 1
```

```
    while lo < hi:
```

```
        L[lo], L[hi] = L[hi], L[lo]
```

```
        lo, hi = lo + 1, hi - 1
```

```
    return L
```

```
def reverse_2(L): # 循位置访问?
```

```
    for i in range( len(L) ):
```

```
        L.insert(i, L.pop())
```

```
    return L
```