Python 笔记

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目录

1 Python知识点回顾及补充

2 基本语法

Python 基础补充。语法，到一些特性特点。
Python 变量作用域 *args,**kwargs

2.1 Python 数据结构的用法还有特点

List, Tuple, Set, Dictionary等

2.1.1 List

- **Remove Specified Item** listname.remove(itemname)
- **Remove Specified Index**
  1. thislist.pop(index) pop()默认移除最后一个元素
  2. del listname[index]
- **Clear the List** list依旧存在清空所有元素
- **Sort list** thislist.sort(reverse = True)
- **Copy a list** mylist = thislist.copy(), list2 = list1 will only make a reference. if list1 got changed then the list2 will be the same as list1. The copy method will remove this kind of problem. Once use copy, it will build a new list without relationships with the origin one.

List Methods

2.1.2 Tuple

1. **When we say that tuples are ordered, it means that the items have a defined order, and that order will not change.** 顺序设定后无法变更
2. **Tuple stores multiple items in a single variable.** 可以存储多个值

Method	Description
append()	Adds an element at the end of the list
clear()	Removes all the elements from the list
copy()	Returns a copy of the list
count()	Returns the number of elements with the specified value
extend()	Add the elements of a list (or any iterable), to the end of the current list
index()	Returns the index of the first element with the specified value
insert()	Adds an element at the specified position
pop()	Removes the element at the specified position
remove()	Removes the item with the specified value
reverse()	Reverses the order of the list
sort()	Sorts the list

3. **A tuple is a collection which is ordered and unchangeable.**

4. **Allow Duplicates** 允许重复

The rules of index of Tuple is similar as List.
Update tuples. 1. to list;2. update values;3. Casting to list

Example

Convert the tuple into a list to be able to change it:

```
x = ("apple", "banana", "cherry")
y = list(x)
y[1] = "kiwi"
x = tuple(y)

print(x)
```

图 1: Update Tuple

Unpacking the tuple
fruits = (”apple”, ”banana”, ”cherry”)
(green, yellow, red) = fruits

2.1.3 Set

Properties:

- Unordered, Unordered means that the items in a set do not have a defined order. Set items can appear in a different order every time you use them, and cannot be referred to by index or key.
- Unchangeable, Sets are unchangeable, meaning that we cannot change the items after the set has been created.
- Duplicates not allowed, Sets cannot have two items with the same value.

details about some functions
thisset = {"apple", "banana", "cherry"}

- Add Items thisset.add("orange")
- Add Sets
  tropical = {"pineapple", "mango", "papaya"} thisset.update(tropical)
- Add Any Iterable
  mylist = ["kiwi", "orange"] thisset.update(mylist)
- Remove Item
  thisset.remove("banana") or thisset.discard("banana")
  If the item to remove does not exist, remove()/discard() will raise an error
- The clear() method empties the set
- The del keyword will delete the set completely example: del listname

Two approaches of updaing the elements 一个是建了一个新的set，一个是在原有的set上进行更新

```
set1 = {"a", "b" , "c"}
set2 = {1, 2, 3}

set3 = set1.union(set2)
set1.update(set2)
```

Method	Description
add()	Adds an element to the set
clear()	Removes all the elements from the set
copy()	Returns a copy of the set
difference()	Returns a set containing the difference between two or more sets
difference_update()	Removes the items in this set that are also included in another, specif
discard()	Remove the specified item
intersection()	Returns a set, that is the intersection of two other sets
intersection_update()	Removes the items in this set that are not present in other, specified s
isdisjoint()	Returns whether two sets have a intersection or not
issubset()	Returns whether another set contains this set or not
issuperset()	Returns whether this set contains another set or not
pop()	Removes an element from the set
remove()	Removes the specified element
symmetric_difference()	Returns a set with the symmetric differences of two sets
symmetric_difference_update()	inserts the symmetric differences from this set and another
union()	Return a set containing the union of sets
update()	Update the set with the union of this set and others

Set Functions

2.1.4 Dictionary

- dictionary.keys() return keys as list
- dictionary.values() return values as list
- dictionary.update() thisdict.update("color": "red") The update() method will update the dictionary with the items from a given argument. If the item does not exist, the item will be added.
- **The pop() method removes the item with the specified key name**
- *The popitem() method removes the last inserted item (in versions before 3.7, a random item is removed instead)*

- **The del keyword removes the item with the specified key name**
  del thisdict["model"]
- The del keyword can also delete the dictionary completely
  del thisdict
- The clear() method empties the dictionary
- Copying dictionary using = will also make a reference as mentioned in tuple. The correct approach to make a copy is using copy()

2.1.5 collection library

2.2 异常处理

try except else finally
assert，断言。 From W3C School， the assert keyword let you test if a condition in your code return True, if not, the program will raise an AssertionError.

raise 触发异常

2.3 OOP

继承，多继承
函数重写
类属性 __private_attrs
类函数：public/private
重载(overload)
重写(overwrite)
覆盖(overrode)

- __init__
- __new__

2.4 正则表达式

知识空白，re基础库

2.5 标准库

os, sys, re, datetime

2.6 IO处理

text, csv, excel, json, 文件写入和读，追加/覆盖...

3 Django

补充 Django 基础知识。目前对于Django的一些使用，前后端数据交互，Model,

4 Scrapy

初步探索Scrapy。

5 Python 面试

收集一些Django岗面试题，或者python岗面试题。 [:: - 1]