**一、集合**

（1）*# 集合 set无序 无index 无key 无y元素放置的先后顺序*

*# 特点：不重复，元素都是唯一的*

*# 有顺序*

sets = set((1,2,3,4))  
sets = set([1,2,3,4])  
print(sets,type(sets))

（2）#交集 “& 或 intersection ”  
print(set1.intersection(set2))  
print(set1 & set2)

（3）# 并集 " | 或 union"  
print(set1|set2)  
print(set1.union(set2))

（4）*# 差集 “ difference”*print(set1.difference(set2))  
print(set1-set2)  
print(set2-set1)  
print((set1|set2)-(set1&set2))

（5）*# 子集 "issubset" 父集 “ issuperset”*

set3 = set([3])

print(set3.issubset(set1))

*# set3 是不是 set1 的子集*print(set1.issuperset(set3))

*#set1 是不是set3 的父集*

（6）*#空集*print(set([]))

（7）*# 反向差集： set1 与 set2 的并集 - 交集 // (set1-set2)|(set2-set1)*print(set1.symmetric\_difference(set2))  
set5 = set([1,3,5,2,4,2])  
set5.add(6) *# 添加的不能有集合中有的*

（8）*# 删除*set5.remove(5)  
*# 删除最上层 不可以有参数*set5.pop()  
*# 删除*set5.discard(3)  
print(set5)

（9）*#*print(set1,set2)  
set2.pop()  
set2 = set([5])  
set1 = set([3])  
print(set1.isdisjoint(set2))  
*#False:有交集 有重复元素 #True ： 没有交集 无重复元素*

二、文件

# 文件  
# 获取文件内容  
#文件句柄：模式： 读r 写w 追加a  
  
#读取文件  
#data = open ("abc1",encoding = "utf-8")  
#print(data.read())  
#data.write("111111")  
#data.flush()  
#data.close()  
  
  
# 相对路径 绝对路径  
#data = open("D:/first.txt","r",encoding = "utf-8")  
#print(data.read())  
#data = open("D:/first.txt","w",encoding = "utf-8")  
#data.write("11111")  
#data.close()  
  
# 追加 a  
'''  
data = open("D:/first.txt",'a',encoding = "utf-8")  
data.write("4444")  
data.close()  
print(data.read())  
'''  
  
#新建文件  
data = open(**"D:/second.txt"**,**'w'**,encoding= **"utf-8"**)  
data = open(**"D:/third.txt"**,**'a'**,encoding= **"utf-8"**)  
data = open(**"abc2"**,**'w'**,encoding= **"utf-8"**)

*# r+ 读写属性 从文件的开头写 ，如果文件内有内容就覆盖*data = open( **"abc1"**,**"r+"**,encoding=**"utf-8"**)  
*#data.write("今天2月1号了")  
#data.write("明天2月12号")  
#data.write("bbbb")  
#data.flush()  
#data.close()  
  
# w+ : 读写属性 先清空内容 从文件的开头写*data = open( **"abc1"**,**"w+"**,encoding=**"utf-8"**)  
*#data.write("cccc")  
#data.flush()  
#data.close()*print(data.read())  
  
*# a+ 追加 以附加方式打开文件*data = open(**"abc1"**,**'a+'**,encoding=**"utf-8"**)  
*#print(data.read())*data.write(**"---------"**)  
data.flush()  
data.close()  
data=open(**"abc1"**,encoding= **"utf-8"**)  
print(data.read())

**import** shutil  
**import** zipfile  
  
f1 = open(**"abc1"**)  
f2 = open(**"abc4"**,**"w"**,encoding=**"utf-8"**)  
shutil.copyfileobj(f1,f2) *#复制文件内容*shutil.copy(**"abc1"**,**"abc3"**)  
*#shutil.copystat("abc1","abc4")*shutil.copymode(**"abc1"**,**"abc4"**)

*#压缩文件  
#shutil.make\_archive("E:/aa","zip","D:/pythonworkspace/study1")  
#将D:/pythonworkspace/study1 压缩到D下  
#shutil.make\_archive("D:/pythonworkspace/study1.zip")  
#D:/pythonworkspace/study1.zip***import** zipfile  
**'''  
z = zipfile.ZipFile("D:/a.zip","w")  
z.write("bytes.py")  
z.close()  
'''***#解压*z = zipfile.ZipFile(**"D:/a.zip"**,**"r"**)  
z.extractall(**"D:/abc"**)  
z.close()

*#file = open("abc1",'rb')  
'''  
file = open("abc1","r",encoding = "utf-8")  
print(file.readable())  
#print(file.read(6)) # 6: 读取6个字符  
#print(file.readline().strip())  
#print(file.readline())  
'''***'''  
print(file.read()) #文件读取时会记录标记，再读取从新的标记开始向下读取，而不是从头开始  
print(file.tell()) #读取文件句柄时，现在读取了多少个字符, 读到哪了  
print(file.seek(0)) #将标记移动到开头  
print("+++++++++++++++")  
print(file.read())  
file.seek(0)  
print(file.readlines()) #内容添加到列表中  
'''  
"""  
ssssssss  
ssssssss  
sdsdsdssdsdsd  
aaaaaaa  
"""***#d全部替换成？*lines = **""***#with open("abc1","r",encoding="utf-8") as f:  
# for line in f:  
# print(line)*f = open(**"abc1"**,**"r"**,encoding=**"utf-8"**)  
**for** line **in** f:  
 **if "d" in** line:  
 line = line.replace(**"d"**,**"?"**)  
 lines +=line  
f = open(**"abc1"**,**"w"**,encoding=**"utf-8"**)  
f.write(lines)  
f.flush()  
f.close()  
  
f = open(**"abc1"**,**"r"**,encoding=**"utf-8"**)  
*#for line in f:  
 # if "d" in line:  
 # line = line.replace("d","?")  
 # lines +=line*f = open(**"abc1"**,**"w"**,encoding=**"utf-8"**)  
f.write(lines)  
f.flush()  
f.close()