csv文件存储

读取csv文件：

csv文件：股票数据

```
时间,收盘价,涨跌
2017/2/20,70.05,涨
2017/2/21,71.58,涨
2017/2/22,70.56,跌
```

(1) 直接读取每一行

```
import csv
with open('股票数据.csv' ,'r') as f:                    header: ['时间', '收盘价', '涨跌']
 reader = csv.reader(f)  #reader是一个迭代器哦      ['2017/2/20', '70.05', '涨']
 header = next(reader)                              ['2017/2/21', '71.58', '涨']
 print('header:',header)                            ['2017/2/22', '70.56', '跌']
 for x in reader:                                   ['2017/2/24', '73.65', '涨']
   print(x)                                         ['2017/2/25', '77.85', '涨']
```

(2) 按照字典输出每一行

```
import csv
with open('股票数据.csv' ,'r',errors='ignore') as f:
 reader = csv.DictReader(f)  #reader是一个迭代器哦        <class 'csv.DictReader'>
 print(type(reader))  #<class 'csv.DictReader'>         OrderedDict([('时间', '2017/2/20'), ('收盘价', '70.05'), ('涨跌', '涨')])
 for x in reader:                                        OrderedDict([('时间', '2017/2/21'), ('收盘价', '71.58'), ('涨跌', '涨')])
   print(x)                                              OrderedDict([('时间', '2017/2/22'), ('收盘价', '70.56'), ('涨跌', '跌')])
# 编码默认 encoding = 'gbk'                               OrderedDict([('时间', '2017/2/24'), ('收盘价', '73.65'), ('涨跌', '涨')])
# errors='ignore'可以忽略编码错误哦                        OrderedDict([('时间', '2017/2/25'), ('收盘价', '77.85'), ('涨跌', '涨')])
```

写入csv文件：

写入数据到csv文件，需要创建一个writer对象，主要用到两个方法。一个是writerow，这个是写入一行。一个是writerows，这个是写入多行。示例代码如下：

(1) 直接写入每一行

```
import csv
header = ['时间', '收盘价', '涨跌']
data  = [['2017/2/20', '70.05', '涨'],
         ['2017/2/21', '71.58', '涨'],
         ['2017/2/22', '70.56', '跌']]
with open('stock.csv','w',encoding = 'utf-8',newline='') as f:
#这里写入文件时要以空格结尾，默认是换行
 writer = csv.writer(f)
 writer.writerow(header) #先写入一行，即标题行
 writer.writerows(data)  #再写入多行，即数据行
```

(2) 将字典写入每一行

```
import csv
header = ['时间', '收盘价', '涨跌']
data  = [{'时间':'2017/2/20','收盘价': '70.05','涨跌': '涨'},
         {'时间':'2017/2/21','收盘价': '71.58', '涨跌':'涨'},
         {'时间':'2017/2/22','收盘价': '70.56', '涨跌':'跌'}]
with open('stock.csv','w',encoding = 'utf-8',newline='') as f:
  writer = csv.DictWriter(f,header) #这里要指定我们的字典key
    writer.writeheader()  #使用这个方法保存我们的标题到文件中
     writer.writerows(data)
```