# 机器学习概述

Numpy：科学计算库

Pandas：数据分析处理库

Matplotlib：数据可视化库

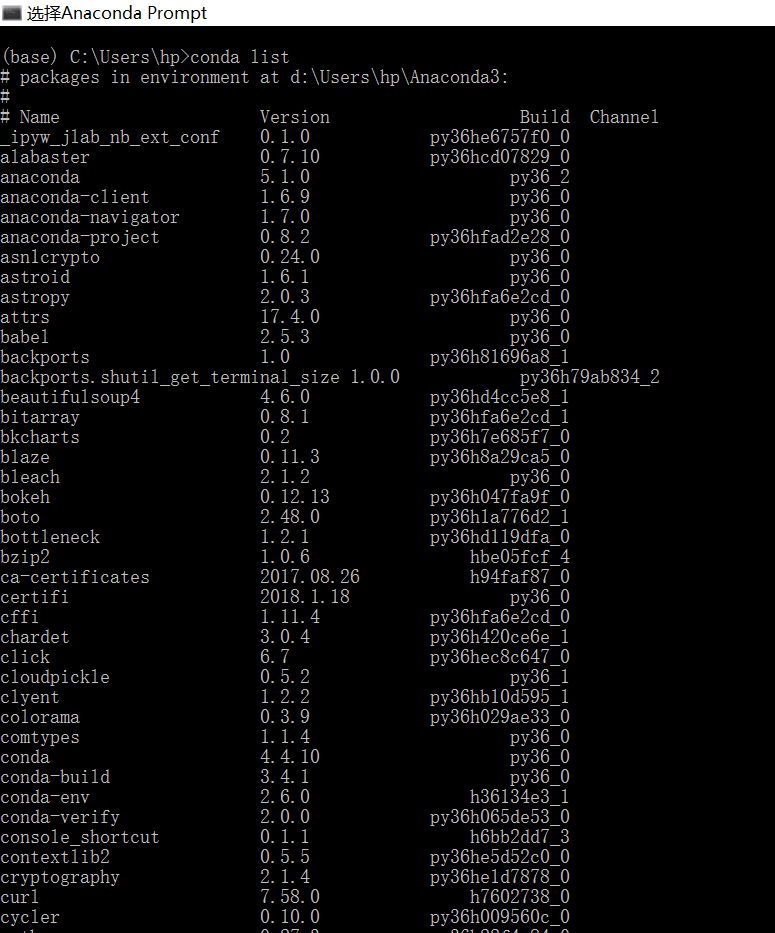
Scikit-learn：机器学习库

# Anaconda的安装

anaconda官网：<https://www.anaconda.com/download>

备用网址：<https://mirrors.tuna.tsinghua.edu.cn/anaconda/archive>

conda list



## Anaconda库的安装

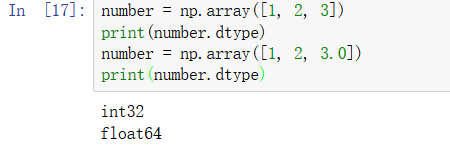
查询相关库：anaconda search -t conda tensorflow

显示详细的安装信息：anaconda show 包名

To install this package with conda run:

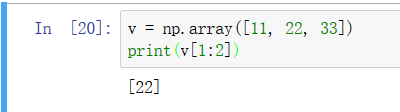
conda install --channel https://conda.anaconda.org/nehaljwani tensorflow-gpu

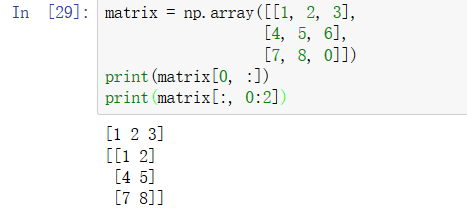
# Numpy基本操作



Numpy.array()参数必须是同一类型

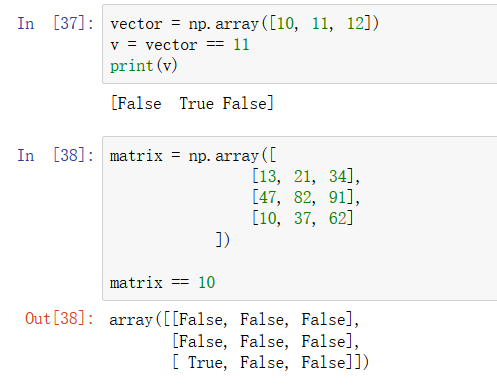
## 切片操作



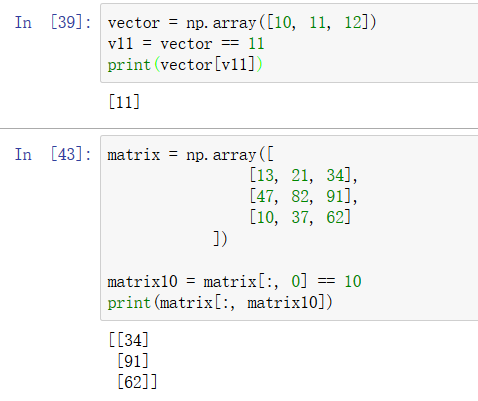


## 基本运算

### 判断大小



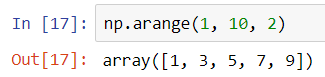
### 布尔类型当做索引



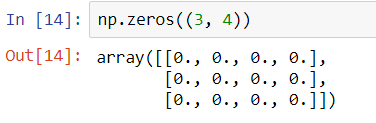
## Numpy 常用函数

### np.arange()

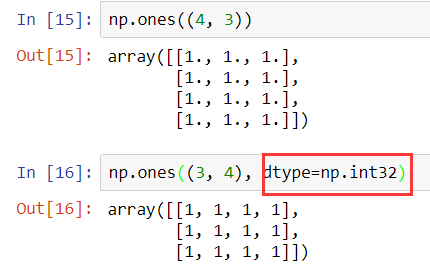




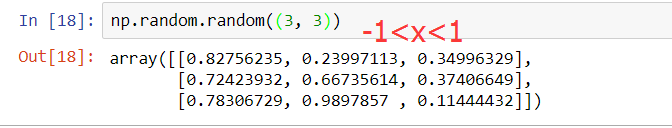
### np.zeros(())



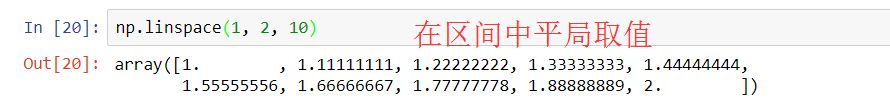
### np.ones()



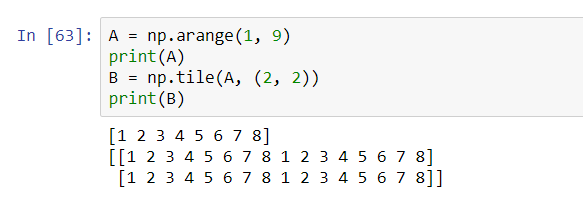
### np.random.random()



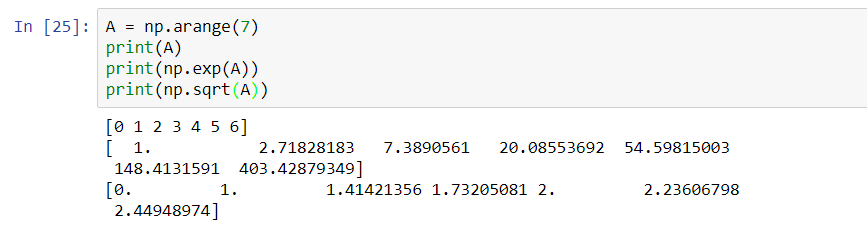
### np.linspace()

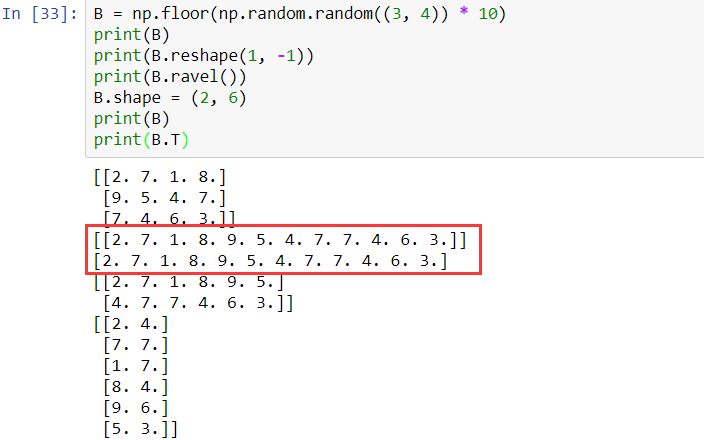


### np.tile()

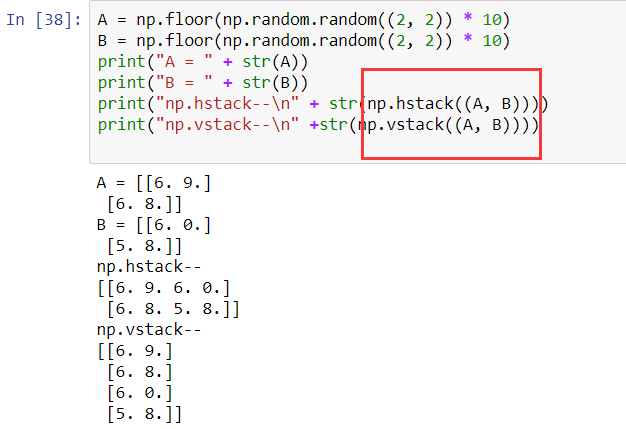


## 矩阵的一些操作

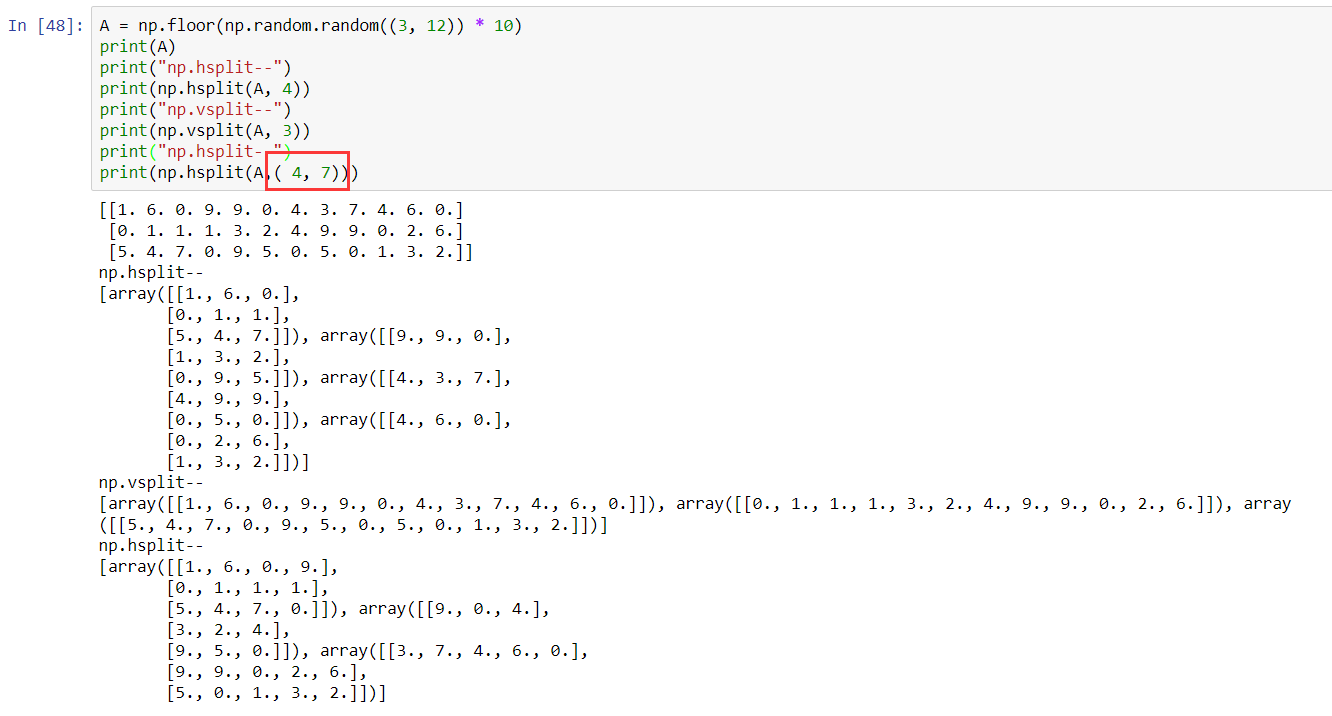




### 矩阵的拼接



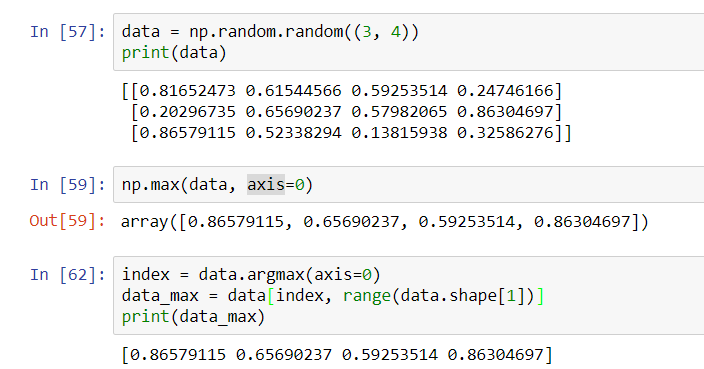
### 矩阵的分割



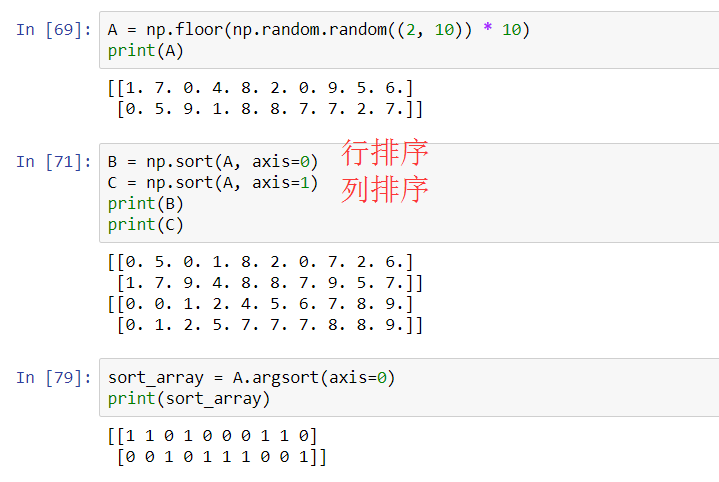
### 矩阵的复制



### 索引



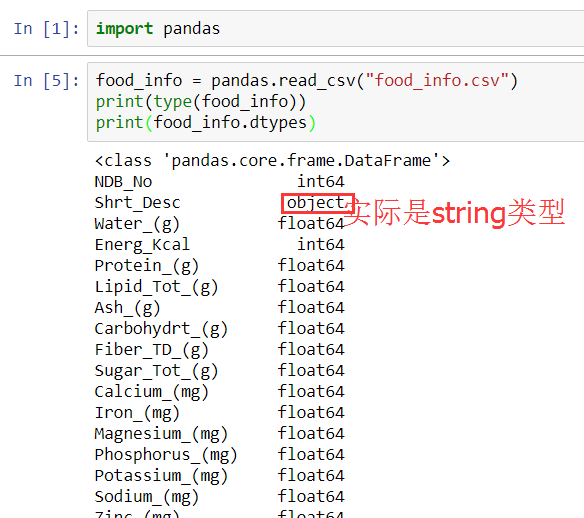
### 排序



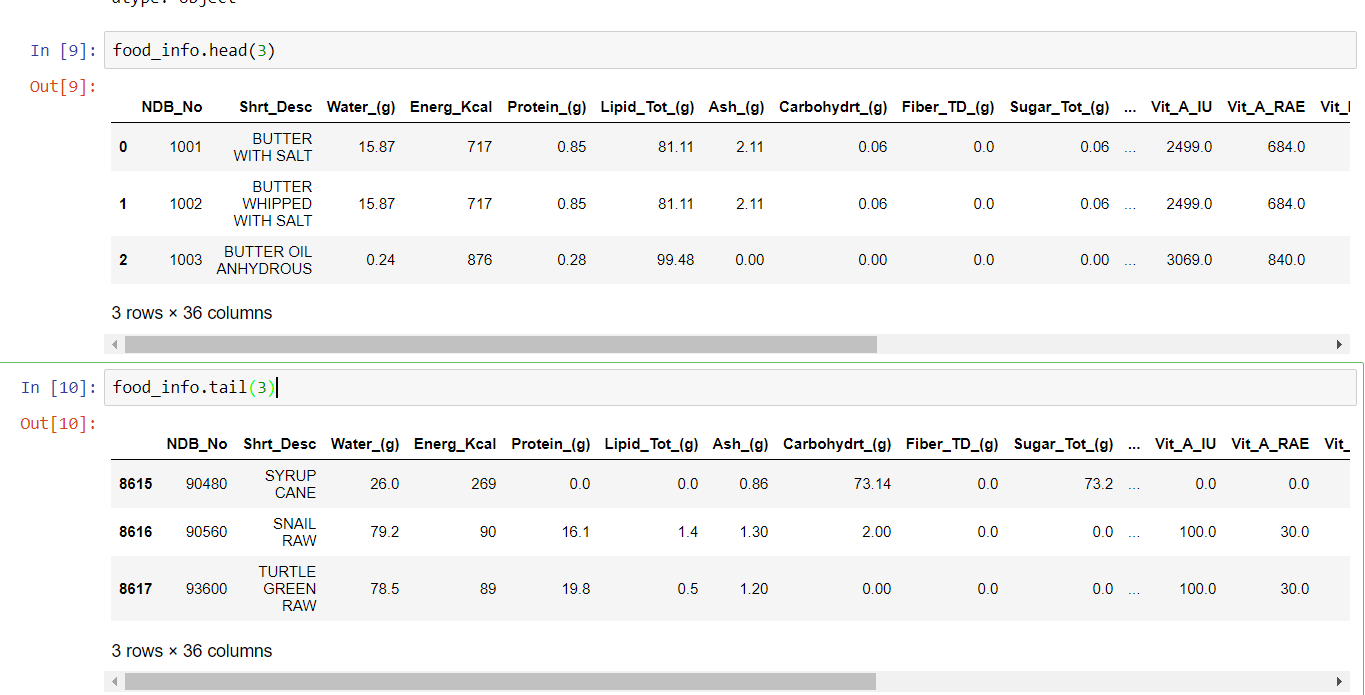
# Pandas库

## 读取数据

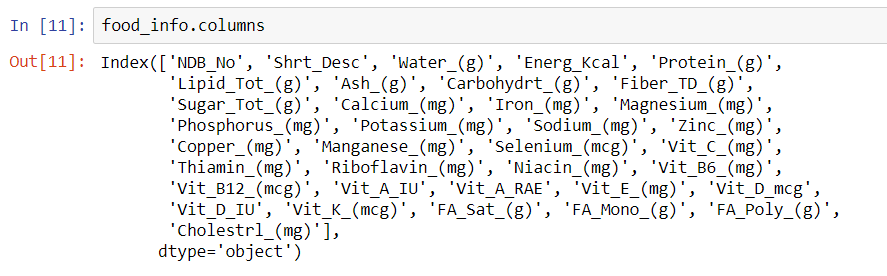
### 导入文件



### 显示部分数据

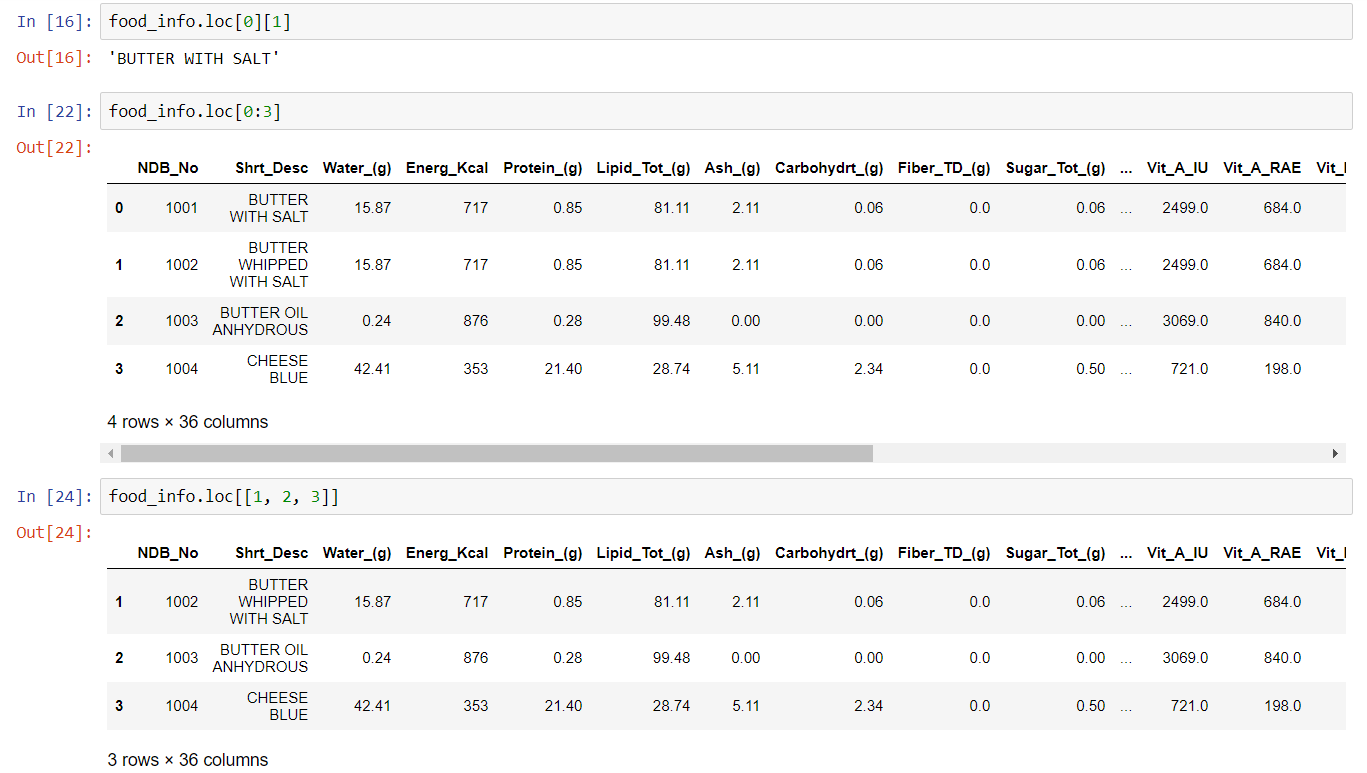


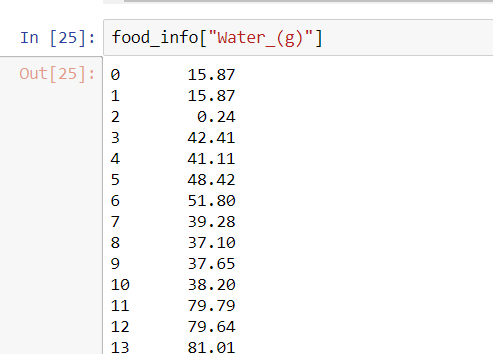
### 显示数据指标

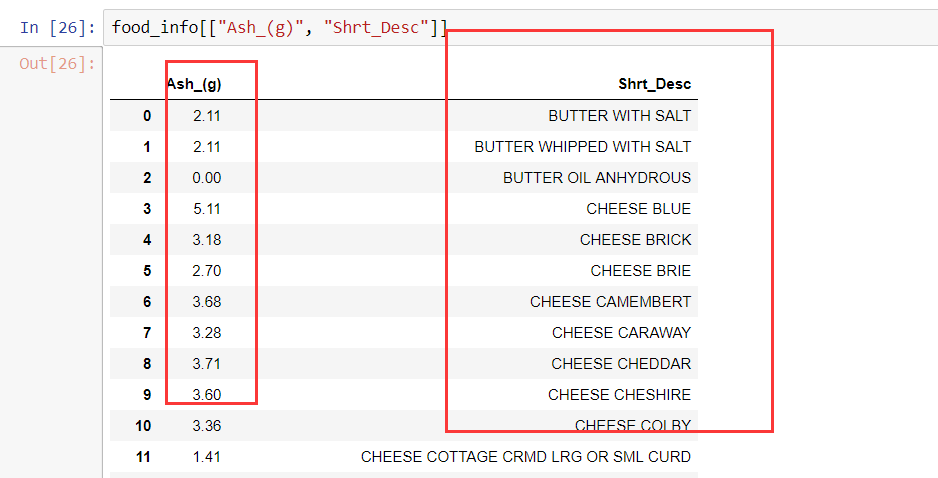


## 取出数据

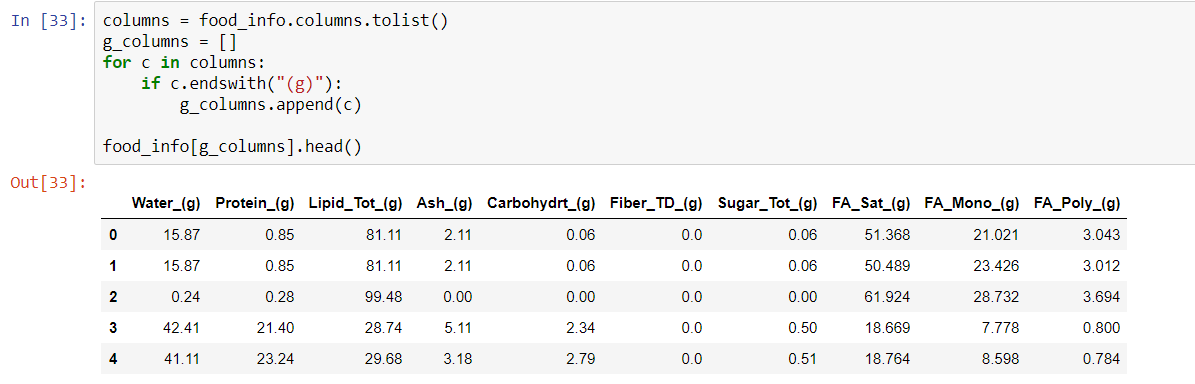
### loc



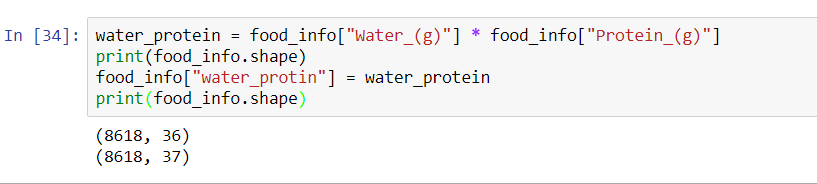




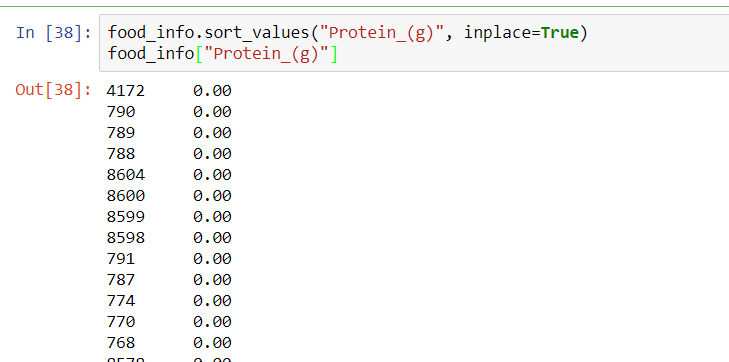
## 案例

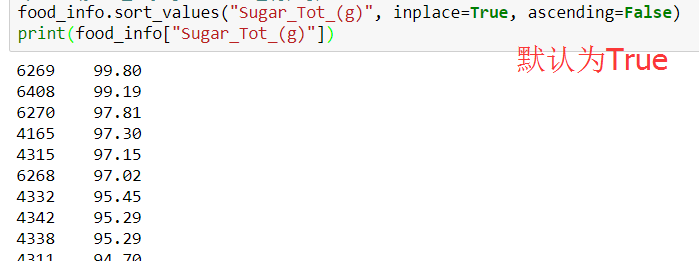


## 根据已有的样本添加新的特征

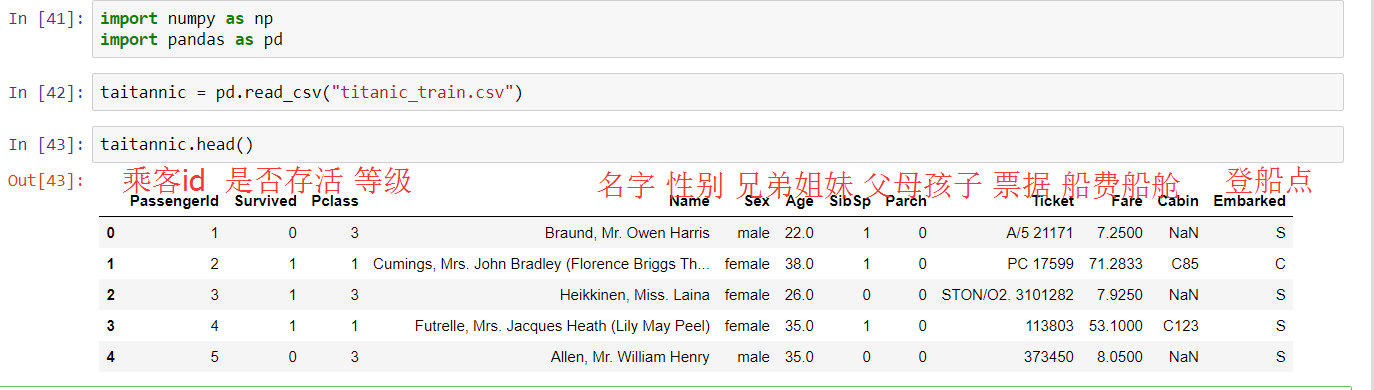


## 排序

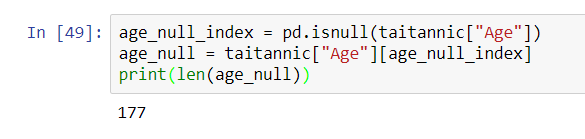




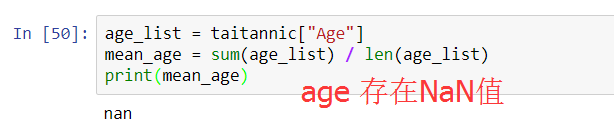
## 泰坦尼克号数据分析

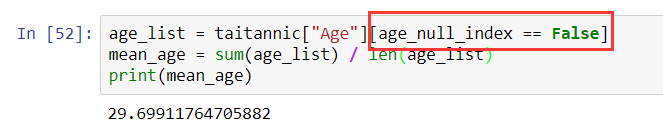


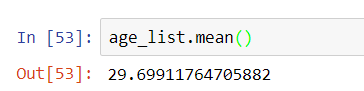
### 统计年龄未知的



### 算出平均值







### 分类统计

