Problem 1,

I get the data with DataReader. If there is any error, I remove the wrong ticker from my list.

I choose to use s&p500 as my tickers list.

If I find Nan, I will use the mean of the previous price and the next price as the missing data.

表格

描述已自动生成

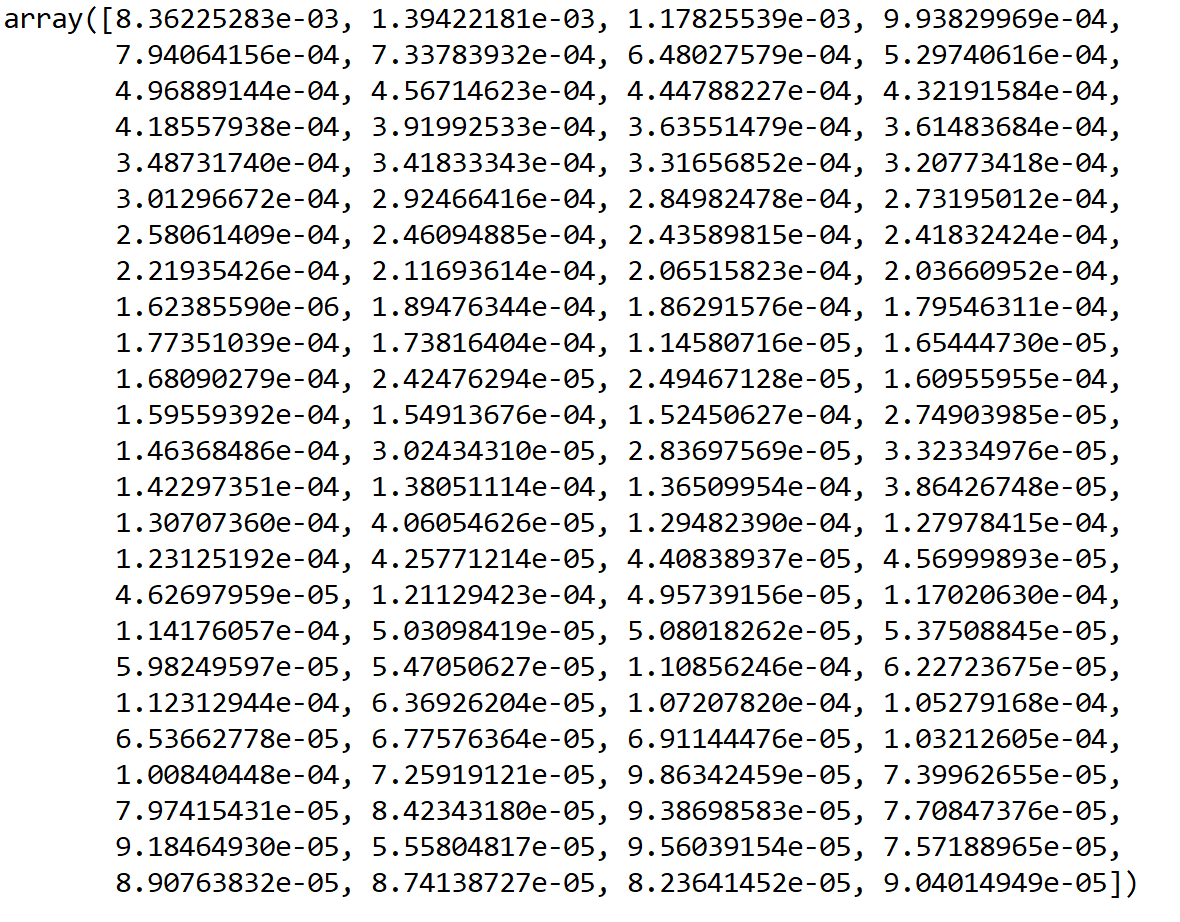
图形用户界面, 表格

描述已自动生成

表格

描述已自动生成

Eigen values are all positive.



图片包含 游戏机, 桌子, 电脑

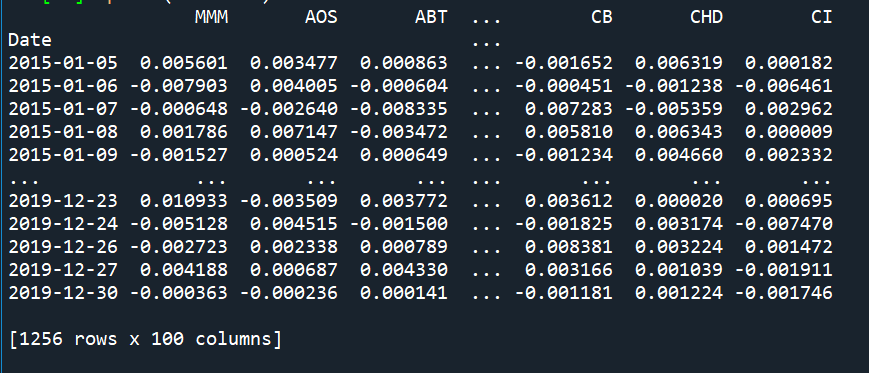
描述已自动生成

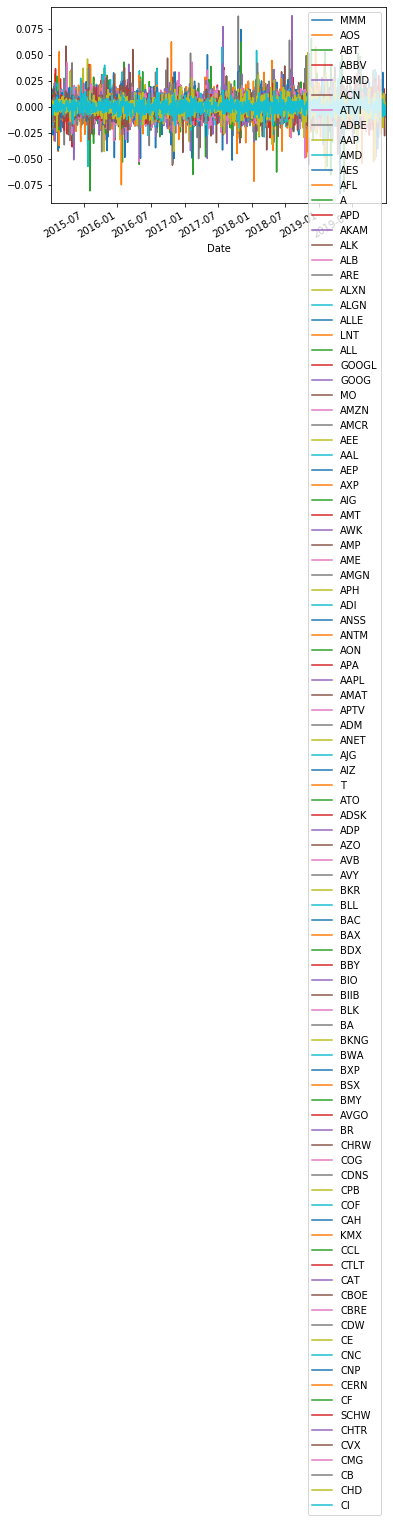
8 eigenvalue is required to account for 50% of the variance.

55 eigenvalues are required to account for 90% of the variance.

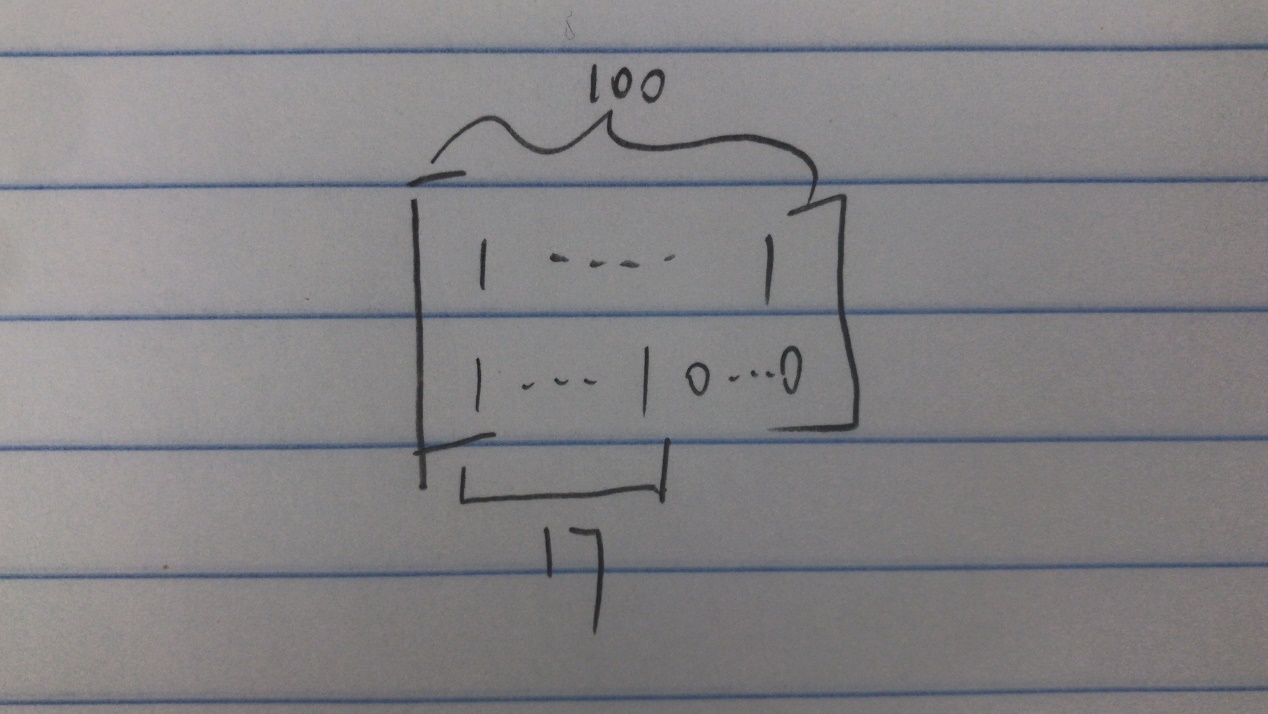
I think it make sense, since at the same period, stocks in the same market tend to have similar returns.

5.





Problem 2



图形用户界面, 文本

描述已自动生成

2.

Let a =1

背景图案

描述已自动生成

It looks ok for mutual fund.