Sheet

```
import pandas as pd
import pandas_datareader.data as web
all_data = {ticker: web.get_data_yahoo(ticker)
            for ticker in ['SPY', 'QQQ', 'GLD', 'XOP']}

price = pd.DataFrame({ticker: data['Adj Close']
                      for ticker, data in all_data.items()})
volume = pd.DataFrame({ticker: data['Volume']
                       for ticker, data in all_data.items()})

returns = price.pct_change()

returns.tail()

returns['GLD'].corr(returns['XOP'])    #allign index values for correlation

returns.GLD.corr(returns.XOP)        #concise syntax of correlation

returns['GLD'].cov(returns['XOP'])   #allign index values for covariance

returns.GLD.cov(returns.XOP)      #concise syntax of covariance

returns.corr()      #table of correlations

returns.cov()       #table of covariance

returns.corrwith(returns.XOP) #Correlations with given variable

returns.corrwith(volume)   #Percent changes with volume
```