# Homework 7

**Problem 1** - Use the Daily stock returns data set. The columns are companies; Man1, Man2, Man3 are manufacturing companies; Serv1, Serv2, Serv3, Serv4 are service companies.

```
stock <- read.csv("https://bit.ly/3egKiMU")
# Multiplying by 100 to convert to % scale
mydata<-stock*100
```

a) Perform confirmatory factor analysis base on two factors: manufacturing and service.

```
# It's pretty straight forward. Make an SEM model based on two factors: Manu
and serv as latent variables to the manufacturing and service return
variables, respectively. Follow a similar process to the CFA for crime data.
```

b) Report the path diagram that shows coefficient estimates. Code: library(semPlot); semPaths(fitted.sem.object, "est")

c) Report SRMR, GFI, and AGFI. What do you conclude? Is the model you made in part (a) approved.

d) Find the 95% confidence interval for the correlation between the two factors: manufacturing and service returns.