**FINN 6216 Homework Assignment #4.1**

1. Go back to the original data (relative shifts) for AAPL and SPY we have been using all along. Let be the initial data point, and let be the sample covariance matrix. Now use the technique I showed you in class to fit a 2d CCC-GARCH(1,1) model to it. What log-likelihood result do you get? What are your alpha and beta parameters?
2. Continuing along the lines of Problem 1, use the same initial data point and initial , and use your newly fitted alpha and beta parameters and simulate the process for 5000 steps in a Monte Carlo run. Compute the 99% VaR for a position of 200 shares of AAPL and 100 shares of SPY.

**This assignment is due March 30.**