Home assignment 2

1. Choose a security (not AAPL or MSFT; can be the same as for assignment 1), put its ticker in the Class list and download four years of adjusted closing prices from *finance.yahoo.com*. Calculate returns and check with the augmented Dickey-Fuller test if returns have unit roots. If yes, choose another security and replace the chosen security in the class list.
2. For the model's estimation, use the first N-5 returns (N is the number of returns in your sample). Run ugarchfit() for ARMA(p, q) + GARCH(1,1) within the range 0 <= p <= 4 and 0 <= q <= 4. List all AIC and BIC values in the tables and choose the models with the lowest (best) AIC and BIC.
3. Do the forecasts of returns for the last 5 days of your sample with ugarchforecast() for the best AIC-based and best BIC-based models, and calculate their bias, MAD, and MSE. Compare the accuracy of both ARMA+GARCH models (if they are different) and the random walk model.
4. Write report and attach your R script in the end.