CE640 / OC512 Matlab
Homework 4 – reading files…

1. Look at the file hw4_data.txt. This comes from the Stonewall Bank buoy. See http://www.ndbc.noaa.gov/station_history.php?station=46050. This is the 'standard met' file from September 2013. The data format is at http://www.ndbc.noaa.gov/measdes.shtml. Write a m-file that will read this complete file, including variable names and units. Make a plot of air temperature as a function of time. There are many ways to do this. Your horizontal axis could simply be decimal days (ranging from 1 – 30). To make it much nicer, you could look up help on datenum and datetick. These functions will allow you complete control over the formatting of time on the horizontal axis. Make a second plot that plots (scatter) waveheight against wind speed to see if there is any correlation there.
2. In the same mfile, have it write a file (called hw4_daily_data.txt) that has a single row for each day. The format of this file should be largely the same as the input file (same headers, for example). However, the hh and mm columns will no longer be there. Each row should now be an average of the data values for that day. Write the file out as simple ascii text.

Your submission should be a .zip file or a .gz file. The archive must have your .m file AND the data file (hw4_data.txt) together….