CE640 / OC599 – MATLAB – Fall 2013
Class 2 Assignment
(due beginning of class, Oct 15)

The purpose of this assignment is to make you comfortable with indexing into matrices and manipulating strings.

Please create an m-file to do the following:

- ***load*** the data file monterey.dat, as provided to you. This can be done with the 'load' command. We will discuss file input in much greater detail later. If you open the file in a text editor, you will note that it contains monthly rainfall statistics in mm for Monterey, CA from 1969-1979.
- Plot the monthly rainfall curves for both 1969 and 1976, showing both the line and a symbol. Change the labels of the x-axis to appropriate month symbols. Do this by creating a vector month consisting of datenumbers (***datenum***) for the first of each month for any year you chose. Use month as the x-vector in the plot call, then use the function ***datetick*** to create the appropriate date strings on the x-axis. Add a figure title (***title***) and label both axes (***xlabel***, ***ylabel***) and add a legend to label each curve (***legend***).
- Find the monthly mean rainfall for the period 1969-74 and for 1975-79. Plot and label each curve as above, adding an appropriate title to the figure.
- Find the average rainfall by season. There are many ways to do this – try to think of elegant approaches. Plot the result using a labeled bar graph (***bar***). The title of the graph should be 'Monterey rainfall by season, total = xxx mm'. You will need to compute the mean total rainfall and put it in the xxx spot. To do this title, you need to create a concatenated string that includes the text before xxx, the value of xxx converted to a string using ***num2str*** (with an appropriate precision) and the text after xxx, all concatenated together (with [ ]).
- Find the total rainfall for each year. Sort this vector from least to most (***sort***), saving the index order of the resulting sort. Display (to the command window) the ordered list of year and rainfall.

- Turn in your m-files, suitably commented, and your plots.