ESC 251 **HW 8** **Due: Sep. 21**

Remember to indent the bodies of your `IF-THEN` blocks. Print out your MATLAB files and remember to include the output from your test runs.

1) (2 pts) An important application of `IF-THEN` statements is *error checking*. Error checking means that you take steps to ensure that a calculation won't fail before attempting to perform it. Examples of this include dividing by zero, taking the square root of a negative number, taking the log of a negative number, etc.

   Write a MATLAB script program that will ask the user to input 2 values a and b. If (and only if) it is feasible to do so, the program should compute the quotient $\frac{a}{b}$ and display the result. Otherwise, the program should print out an appropriate error message. Devise 2 test cases that will test each branch of your `IF-THEN` statement.

2) (3 pts) Write a MATLAB script that will read in a value from the keyboard and print out a message telling the user whether the value is either even or odd. The `mod` function will be useful here.

3) (4 pts) NOTE: You should assume that you are working only with real (not complex) numbers for this problem. Write a program that will ask the user to input a value x and test if the function

$$y = \ln\left(\frac{1}{x^2 + x - 6}\right)$$

   can be computed for that value of x. If y can be computed, the program should print the corresponding value of y. If y cannot be evaluted, the program should print out an appropriate error message. Test your program for two values of x that work and one that does not.