## CISC106 Fall 2008 Lab07

- Review the code examples from class.
- Some programs below are associated with a question. **Answer the questions** using comments below your code in the m-file.
- The office hours of the TAs and the instructor are on the class website. Visit us!
- **NOTE:** Every function comment section should contain, at a minimum, *three examples* of the function being called and the result of evaluating the call. These examples must include boundary conditions (as discussed in class). Your test files must cover *at least* these exact examples (otherwise, why did you choose them?) and possibly more. Testing is important.
- Every M-file you write or modify must be demonstrated, either by running a script test file in a diary or by testing at the command line. Note that if you write function **foo.m** and test script **fooTest.m**, you can demonstrate both by running only fooTest.m (assuming fooTest works).
- New practice: Each problem below has a list of the files you are required to create. Use these names to receive full credit.

## **Problems**

1. files: one or two index.html files and one directory. Do not submit either one (we can see them on the web).

Make two web pages, as described in makeWebpage.html.

The most common errors in this task are those involving file permissions and files being in the wrong directories.

2. files: diary

Use the "help" function at the command line to find out what the **any**, **all** and **which** functions do. Demonstrate their use in a diary.

3. files: diary (with typed answers)

Create a vector **v** of 20 random numbers using the MATLAB rand function.

Evaluate:

gt = v > 0.5;

Now look at the contents of gt, and then use "whos" to answer: What is the data type of gt? Now evaluate:

v(gt)

Explain what you see in the result in terms of v and gt.

Read 4.3 and 4.3.1. The logical array gt is serving as a mask to select elements of v. In a diary file, create and use this mask to change all elements of v greater than 0.5 to 7, and all other elements to -7.

4. files: charvowels.m, charvowelsTest.m

Write a function that accepts a character string and returns a logical array with true values corresponding to each vowel and false values everywhere else. Be sure that the function works properly for both lower-case and upper-case characters.

If your TA requires a paper copy, be sure that you have a printed copy of your function M-files, script M-files and diary files demonstrating your testing. All must be stapled together, with your name and lab section on the top page.

Be sure that you upload a copy of all the MATLAB function, script, imasge, and diary files to Sakai. Then, click submit ONLY ONCE to send these to your Sakai and your TA.

## On the first page of every printed copy for this course, your name, section, and TA's name must appear.