CSS 341: Final Exam Review

What have we learned?

- The environment where we would work in, when using computer-programming languages to solve problems. These include:
    a. System software: editor, interpreter, loader, and operating system.
    b. What do these software do?
    c. What is the order you would invoke these software?
    d. When you double click on your vbs file, what happens?
- Specifics of VB Script and the environment:
    a. What do the statements/keywords: "Dim", "Option Explicit", etc. mean/do?
    b. VBScript statements in our on-line class examples:
        - ➢ *MsgBox "print a message" & vbCrLf, , "Label"*
            a. what does the ",," do?
            b. What is "*vbCrLf*"?
    c. External *library*/*object* support: e.g., scripting file system, dictionary, etc.
    d. Where/what is *wscript*? How would you invoke *wscript* or a vb script from the command line? Why do we care?
    e. In general, you should understand *every single line* of *every* example posted on-line.
- Control structures of high-level programming languages, and more importantly, how to use these control structures to design solutions (develop algorithm) for well-defined problems.
    a. *if/else, while*, *for, switch, do/while*
    b. Defining iterations, formulating and checking conditions to solve well-defined problems.
- Program components: Functions.
    a. Storage classes: local vs. global
    b. Understanding code developed based on recursion vs iterations (***not covered***)
    c. Scope rules
    d. Parameter passing: pass by value vs pass by reference
- Arrays: declare/passing to functions/one-dimensional array.
- Misc.
    a. Extracting digits in an integer
    b. String manipulation and regular expressions
    c. Command line argument parsing
    d. File I/O

Specifics:

- Algorithm design: design solutions based on existing knowledge. E.g.,Write a program to enter a 6 digit-number, extract and reverse the even digits (enter 354890, even digits are: 580, reverse the digits gives: 085). You can use anything we have learned, including loop (you should use loop), array (optional), functions (optional), recursion (optional). Be prepared to write such programs in exams in about 20-30 minutes.