Test 1 will be Tuesday, March 3, in class. It will be closed book and notes, except for one 8.5" x 11" sheet of paper (front and back) with notes. Review topics for Test 1 are:

Chapter 1.

- Basic structure and hardware components of a computer
- Hardware components: Input devices, CPU, Main memory, Output devices, Secondary storage
- Software: system software, and application software
- Data storage: integers (binary), characters (ASCII, Unicode), and other types (reals, pictures)
- Programming Languages: High-level language, Assembly Language, and Machine Language
- Fetch-decode-execute cycle
- Compiler vs. Interpreter

Chapter 2.

- Software development cycle: design, coding, correct syntax errors, test program, correct logic errors
- Input and output statements: input, raw_input, print
- Comments: important of
- Variables and assignment statements: number and strings
- Operators (integer division, remainder (%), exponent (**)) and their precedence
- Mixed-type expressions and conversion
- Advanced output: suppressing newline with print, escape characters, string concatenation, formatting numbers,

Chapter 3.

- Function benefits
- Function definition, calling, run-time stack, local variables, scope, parameter passing
- Global variables and global constants

Chapter 4.

- if statement - syntax, flowchart
- Boolean expression, relational operators, logical operators, Boolean variables
- if-else statement
- string comparisons
- if-elif-else statement

Chapter 5.

- Repetition structure and flow chart, condition-controlled loop and count-controlled loop
- while loop
- for loop with range function
- user controled loop iterations
- calculating a running total
- sentinels
- input validation loop
- nested loops