

CSC 101 Outline for Exam #1

Fall 2012: September 26, 2012

1. Chapter 1 Reading
 - (a) Historical notes section 1.4
2. Computer Organization
 - (a) Familiarity with the CPU diagram discussed in class
 - (b) Components, their function(s)
 - (c) Details of the fetch-decode-execute cycle
3. Algorithms
 - (a) Pseudocode notation
 - i. Assignment statements, input/output, if ..., while
 - (b) Finding largest/smallest in an array
 - (c) Pattern matching
 - (d) Ability to trace an algorithm and understand its operation
 - (e) Ability to modify an algorithm
4. Data representation
 - (a) ASCII characters (don't memorize the chart)
 - (b) Two's complement binary representation,
 - i. Positive and negative integers
 - (c) Converting from any base to base 10
 - (d) Converting from base 10 to any other base
5. HTML tags — know the common tags discussed in class
6. Computer Circuits and Logic Gates
 - (a) Transistor circuits
 - (b) Logic gates: AND, OR, NAND, NOR, XOR, NOT
 - (c) Given a circuit drawn with logic gates, construct a table of output values.
 - (d) Given a table of output values (i.e., a logical function), construct a circuit (using logic gates) to implement that function.
 - (e) Full adder
 - (f) Multiplexor
 - (g) Decoder