

CSCI 1990 TEST 1 STUDY GUIDE SPRING 2009

CHAPTER 1: INTRODUCTION

1. Define:
 - a) Hardware
 - b) Software
 - c) Operating system
 - d) Application
2. List and describe the five main hardware components in a computer system.
3. What is the difference between main memory and secondary memory?
4. List and describe the three main components of the CPU.
5. Explain the fetch-decode-execute cycle.
6. Write a Java application to output "Hello."
7. How do you write a comment in Java?
8. What are the rules for naming identifiers in Java?
9. Explain how Java is translated into machine code and why this makes it portable over the Internet.

CHAPTER 2: DATA AND EXPRESSIONS

1. What is output by `System.out.println("12" + "34");` ?
2. What is output by `System.out.println(12 + "34");` ?
3. What is output by `System.out.println(12 + 34);` ?
4. What is output by `System.out.println("12\n34");` ?
5. What is output by `System.out.println("\1234");` ?
6. What is output by `System.out.println("1234");` ?
7. Describe the following types:
 - a) `int`
 - b) `double`
 - c) `String`
8. When do you declare a variable to be *int* versus *double*?
9. What is the value of each of the following expressions?
 - a) $21 / 4$
 - b) $21 \% 4$
 - c) $21.0 / 4.0$, $21/4.0$, $21.0/4$
 - d) $21 - 4 - 1$
 - e) $64 - 32 + 32 / 8 * 2$
10. If $f=2$, what is the value of f after the execution of `f++`?
11. If $g=2$, what is the value of g after the execution of `g--`?
12. If $c=10$, what is the value of c after the execution of `c+=5`?
13. If $d=20$, what is the value of d after the execution of `d*=5`?
14. If w and j are declared as `double w=6.7` and `int j=5`, what are the values of w and j after executing the following?
 - a) `j = w;`
 - b) `w = j;`
 - c) `j = (int) w;`
15. Write a Java program to input an integer, add 1 to it, and output the result.