CS16, 10W, H05 (Etter 1.3, 2.1-2.3, 3.2) Total Points: 50

Available online at: http://www.cs.ucsb.edu/~pconrad/cs16/10W/homework/H05 (printable PDF)

Accepted: **on paper, in Lecture (11am Thursday Jan 21th)**

Late Policy: No email submission allowed—and don't "slip it under my door". If you need to make it up, you must do so during office hours, or make an appointment to see me, and you must request this appointment within 48 hours of when the assignment was originally due.

Personal Day/Sick Day policy: Everyone is permitted one "personal day/sick day" when you get to make up a missed homework assignment for free during office hours or via appointment. After that, you may not make up the homework assignment—you can only earn back the points through extra credit opportunities.

(For more details, see the syllabus and the homework policy)

Name: (5 pts)_____ UMail address (5 pts) _____@umail.ucsb.edu

Lab Section (5 pts) Circle one: 3pm 4pm 5pm unknown

(Note: For now, circle the lab section you are registered for on GOLD. If you need to request attendance at a different lab section because of an ACTUAL SCHEDULE CONFLICT, please email pconrad@cs.ucsb.edu with details)

This assignment is due **IN Lecture on Thursday.**
It may ONLY be turned in during Lecture on Thursday.
Do NOT turn it in late to your TA on Thursday in lab.

As promised last week, starting today, you need the official textbook for this course by Delores Etter.

The textbook is not yet on reserve in the library, but should be soon. In the meantime, if you want to read a copy, you can come to my office hours, or those of your TA and read a copy there.

For Thursday, read sections 1.3, 2.1-2.4, 3.1-3.4, 4.1-4.2—These are the sections covered on the first midterm. They are mostly review of material covered in lecture already.

Then, answer these questions:

1. Section 1.3 presents a five step problem solving methodology in the context of a program that calculates the distance between two points.

    a. (5 pts) What is the formula that is used to calculate this distance? Describe it in math notation, rather than in C.

    b. (5 pts) How does this formula look after it is converted into C code?

Please turn over for questions to answer

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2. Section 2.1 begins with a review of the C program solution to the problem outlined in Section 1.3, including a review of each line of code and its purpose in the program. This description includes many defintions of technical terms.

   These technical terms are helpful to know, because when your program contains syntax errors, the resulting error messages often contain these technical terms.

   a. (5 pts) Which of the lines of code is a *pre-processor directive* that pulls in information related to the square root function?

   b. (5 pts) Section 2.1 describes declarations and statements.

      Java and C++ also have declarations and statements—in those languages, the two can be interleaved in many different orders. That is not true in C, though.

      Instead, in C, which must come first: declarations, or statements?

3. (5 pts) In Section 2.2, the author mentions the C is a case-sensitive language. What does this mean?

4. Section 2.3 discusses both unary operators and binary operators.

   a. (2 pts) Give an example of a unary operator

   b. (3 pts) Give an example an a binary operator

5. Section 3.2 describes conditional expressions, relational operators, and logical operators

   a. (2 pts) Give an example of a relational operator, and describe its meaning in plain english

   b. (3 pts) Give an example of a logical operator, and describe its meaning in plain english

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End of H05