ECS 30 Spring 2015

Homework 1 due 4-22-2015 (April 22th, 2015) at 4:30pm

(late assignments will NOT be accepted)

Submit homeworks in the "ECS 30" homework box in 2131 Kemper Hall.

- do NOT submit them using "handin" from your CSIF accounts

-you can handwrite them (pencil or pen) or type them in a document; it just needs to be legible (if we can't read it, you will not get points for it)

At the top of your homeworks assignment, please include the following information:

Your Name
Your UC Davis ID number
ECS 30
Spring 2015

TA Tips:

1. These problems are from the "Review Questions" section, *not* "Programming Exercises".
2. If there are several lines of mathematical calculations, please underline or box the final solution.
3. If a command results in an error or seems invalid, write "Error" or "Invalid"
4. For explanation answers, usually 2-3 sentences maximum is sufficient for a clear explanation.

Written assignment #1: Ch. 2: 22; Ch. 3: 12; Ch. 4: 21; Ch. 5: 5, 15; Ch. 6: 6

The problems are reproduced below for your convenience:

Ch.2:

22. By applying the appropriate precedence rules, calculate the result of each of the following expressions.

a. 6 + 5 / 4 - 3
b. 2 + 2 * (2 * 2 – 2) % 2 / 2
c. 10 + 9 * ((8 + 7) % 6) + 5 * 4 % 3 * 2 + 1
d. 1 + 2 + (3 + 4) * ((5 * 6 % 7 * 8) – 9) – 10

TA comment: Assume integer arithmetic

Ch.3:

12. What are the six relational operators that exist in C, and what are the corresponding mathematical symbols?

Ch.4:

21. What ***for*** loop control line would you use in each of the following situations:
    a. Counting from 1 to 100
    b. Counting by sevens starting at 0 until the number has more than two digits.
    c. Counting backward by twos from 100 to 0.

    TA comment: From x to y should include y in the count.

Ch.5:

5. The ***math*** library contains a function with the following prototype:

    double atan2 (double, double);

Even if you have no idea what this function does, what information does the prototype give you about using this function?

15. What does the term ***return address*** mean?

Ch.6:

6. In the examples that use Euclid's algorithm to calculate the GCD of ***x*** and ***y***, ***x*** is always larger than ***y***. Does this matter? What happens if ***x*** is smaller than ***y***?