CS 150: Data Structures, Fall 2009
Homework 2

Due *via email* by 11:59pm on Thursday, September 10

This homework covers the transition guide and Ch1 of the text. Please read and familiarize yourself with this material before working on the homework.

Please type all answers and email to the instructor at echambe5 - at - slu.edu by 11:59pm on the date due.

1. Problem R-1.15 on page 58 of the text:

    Write a short C++ function that takes a positive double value x and returns the number of times we can divide x by 2 before we get a number less than 2.

2. Problem C-1.4 on page 59 of the text:

    Write a short C++ program that outputs all possible strings formed by using each of the characters 'a', 'b', 'c', 'd', 'e', and 'f' exactly once.

3. Extra Credit: Problem C-1.7 on page 59 of the text:

    Write an efficent C++ function that takes any integer value i and returns 2^i as a long value. Your function should *not* multiply 2 by itself i times; there are much faster ways of computing 2^i.

    Note: Faster solutions will receive more extra credit.