Practice Programs

1. Write a program that requests the user to enter two integers.The program should then calculate and report the sum of all the integers between and including the two integers. At this point,assume that the smaller integer is entered first. For example, if the user enters 2 and 9, the program should report that the sum of all the integers from 2 through 9 is 44.
2. Write a program that opens a text file, reads it character-by-character to the end of the file,and reports the number of characters in the file.
3. Write a program that reads up to 10 donation values into an array of double. (Or, if you prefer, use an array template object.) The program should terminate input on non-numeric input. It should report the average of the numbers and also report how many numbers in the array are larger than the average.
4. Here is a structure declaration:
   struct box
   {
          char maker[40];
          float height;
          float width;
          float length;
          float volume;
   };
   a. Write a function that passes a box structure by value and that displays the value of each member.
   b. Write a function that passes the address of a box structure and that sets the volume member to the product of the other three dimensions.
   c. Write a simple program that uses these two functions.
   d. Write a function that has a reference to a box structure as its formal argument and displays the value of each member (Separate program point d & e).
   e. Write a function that has a reference to a box structure as its formal argument and sets the volume member to the product of the other three dimensions.
5. Write a program that uses the following functions:
   Fill_array() takes as arguments the name of an array of double values and an array size. It prompts the user to enter double values to be entered in the array. It ceases taking input when the array is full or when the user enters non-numeric input,and it returns the actual number of entries.
   Show_array() takes as arguments the name of an array of double values and an array size and displays the contents of the array.
   Reverse_array() takes as arguments the name of an array of double values and an array size and reverses the order of the values stored in the array.

The program should use these functions to fill an array, show the array, reverse the array, show the array, reverse all but the first and last elements of the array,and then show the array

6. Suppose the song() function has this prototype:

void song(const char * name, int times);

   a. How would you modify the prototype so that the default value for times is 1?
   b. What changes would you make in the function definition?
   c. Can you provide a default value of "O, My Papa" for the name?