CS250 Intro to CSII
Array of Structs Lab

Problem: Implement a database of books using C++. The database will be read from a file called "books.txt" and there are at most 1000 books in the database. The data file is organized as follows for each book:

title (char [64])
author (char [64])
publisher (char [64])
price (double)

Each book attribute is on a line by itself in the data file.

1) Declare a struct BookInfo that is able to hold a title, author, publisher, and price.

2) Create an array in main capable of holding 1000 books.

3) Write a function that prints out a single book as follows:

    Title: Starting Out With C++
    Author: Tony Gaddis
    Publisher: Addison-Weseley
    Price: $150.00

4) Write a function that reads in a single book into a struct

5) Write a function that reads in all books into the array of books

6) Write a function that accepts the database of books and a price. Print all books in the database with a price less than or equal to the price passed in

7) A simple non-efficient sorting routine is given below. I would like you to write a sorting function that will sort your array of Books by price from lowest price to highest price.

```
void bubbleSort (int values[], int size)
{
  bool bAnySwitches = true;
  int temp;

  while (bAnySwitches)
  {
    bAnySwitches = false;

    for (int i = 0; i < size - 1; ++i)
    {
      if (values[i] > values[i + 1])
      {
        temp = values[i];
        values[i] = values[i + 1];
        values[i + 1] = temp;
        bAnySwitches = true;
      }
    }
  }
}
```