

CS250 Assignment 4

Store Inventory

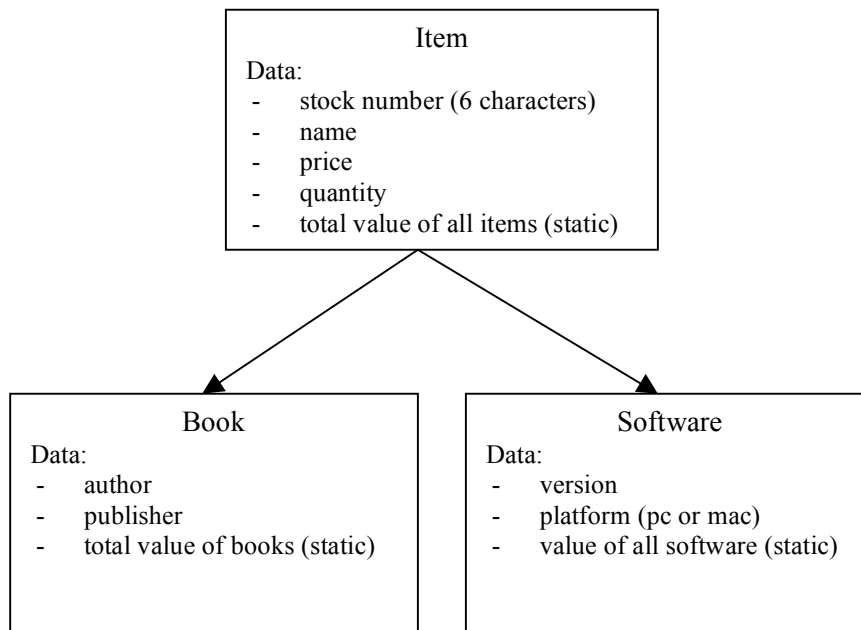
Date Assigned: Friday, April 1, 2005

Date Due: Friday, April 11, 2005

Points: 45

You have been hired by a bookstore to write a program that will enable them to efficiently store their inventory. The store specializes in selling books and software, and although there are different types of information stored for these items (such as author for book, and version for software), some of the type of information stored is the same (such as price, stock number).

After investigating the store, you have identified the following object-oriented hierarchy as the most efficient:



Class `Item` should contain the following member functions:

- A constructor to initialize all the data members
- `getStockNumber()`
- `getName()`
- `getPrice()`
- `getInStock()`: return true if there any of this item
- `addStock(int n)`: adds n of these items to the stock
- `removeStock(int n)`: removes n of these items from the stock
- `setPrice(double p)`
- `print()`: should be virtual. The format for printing is shown below
- `getTotalValue()`

Book should have:

- A constructor to initialize all data members
- `getPublisher()`
- `getAuthor()`
- `addStock(int n)`
- `removeStock(int n)`
- `setPrice(double p)`
- `void print()`
- `getTotalValue()`

The Software class will contain similar functions to the book class.

When printing a book object the output should be:

```
x7831  WindowsNT in a Nutshell      Price: $ 27.95   15 in stock
      Author: Pearce                 Publisher: O'Reilly
```

When printing a software object the output should be:

```
xyz321  Visual Cafe                 Price: $ 110.00  7 in stock
      Platform: Windows              Version: 3.5
```

Notes:

- You MUST follow the coding standards.
- Your classes must work with the driver that I will give you.

How to submit:

- Submit a hard copy of the code by 9am on the day the assignment is due.
- Place the complete project folder in the CS250 drop folder on Turing by 9am on the day the assignment is due.