

COMP 1409 – Assignment #1 (50 points)

Due: 11:59 p.m. the night before session 3

Your client (“Ghostly Books”) is a small bookstore that specializes in books about the supernatural. You have been requested to develop an object-oriented program to help the Ghostly Books staff keep track of store inventory. You begin by creating a prototype.

- Create a new BlueJ project called Ghostly.
- Create a class called Book. Write a summary comment that explains the class.
- Define instance variables (fields) to hold the following pieces of data: title, author, publisher, year published, quantity in stock, purchase price and selling price. Choose descriptive names for your instance variables, and use appropriate data types. Give each instance variable a comment that explains its purpose.
- Create a constructor that has parameters for title, author, publisher, year published and purchase price. The constructor must initialize those five fields to the values passed in. The other fields must be initialized to default values indicating that the book has zero quantity in stock and a selling price of zero dollars. Provide a summary comment for the constructor.
- For each field in the class, provide an accessor method that returns the value of the field. These methods must be named to start with “get”, e.g. `getQuantityInStock()`.
- Provide a method called `restock()`. This mutator method takes a parameter that specifies the number of books to add to inventory, and increases quantity in stock by that number.
- Provide a method called `sell()`. This mutator method reduces quantity in stock by the number of books passed in through its parameter.
- Provide a method called `setPurchasePrice()`. This mutator method accepts the new purchase price as its parameter and changes the appropriate instance variable.
- Provide a method called `setSellingPrice()`. This mutator method accepts the new selling price as its parameter and changes the appropriate instance variable.
- Provide a method called `printDetails()`. This method displays book information on the screen, e.g.
Title: All the Ghosts
Author: Jack Ghostwriter
Publisher: Spectre Press
Year: 2005
Purchase price: \$12.43

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Selling price: $17.95  
Quantity in stock: 34
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- Be sure you have provided a descriptive summary comment for each method.

Use BlueJ to interactively test your methods as you write them. Write them one at a time, and test each immediately to be sure it is correct. Testing requires creating an object and invoking the method.

Marks will be given for:

- Comments – appropriate and complete.
- Style – see the style guide Appendix J of your textbook.
- Correctness and completeness – code meets the requirements listed above.

Create a .zip file containing your entire BlueJ project (zip the folder, not the individual files). Name the .zip file with your name and the assignment number, e.g. "Susan_Wong_Assign_1.zip". Upload the file to WebCT before the cutoff time.