

IT 2650

Assignment #6

Due: March 29, 2017

Worth 50 points

There are 2 activities to be completed in Assignment #6:

1. Read Chapter 10 and 11 in the Farrell text. Complete the step-by-step exercises in the chapters, saving your files in the folders named Chapter.10 for chapter 10 exercises and Chapter.11 for chapter 11 exercises. Include both of these folders in a Zip file named with the first letter of your first name followed by your last name, followed by Assign6. For example if I were doing this assignment the Zip file would be named [jmaloneAssign6.zip](#).
2. Create an abstract class named Publication that includes a String field for the Title, a double field for the cost and an integer field for the quantity. Within the Publication class include a constructor that requires all three arguments that will initialize the three data members. Create the get and set methods for the three data members in the class definition. Create an abstract method that will return the price of a book (the calculation of the price will be different for each subclass). Create a Book subclass that will calculate the price of a book as follows; if the quantity of books is greater than 50 then the price is the cost times 140% minus 5 dollars discount. If the quantity is 50 or below then the 5 dollar discount does not apply. Create a Magazine subclass that has its own data member representing the month of the issue. The constructor for this class should initialize the month data member value. The price for the magazine will be the cost times 160%. You will also need to include get and set methods for the month data member.

Create a class named PublicationArray where the main method will create an array of 10 Publications that will hold 5 Books and 5 magazines. **Do not Prompt for user input, just hard code the data into your program.** Write a for loop to display all the data fields for each element of the array.

Sample output follows:

```
D:\Spring 2017\IT 2650\Assignment Solutions\Assign 6>java PublicationArray
```

```
Student Name:      Jane Doe
IT 2650 Java Programming      Spring 2017
Assignment6        CRN 13906
Due Date:          March 29 , 2017
```

The following is the list of 10 books

```
Publication[0] is Title American Fisherman, Price 3.2, Cost 2.0 quantity 100The name of class is Magazines
Publication[1] is Title C++ Programming, Price 30.0, Cost 25.0 quantity 70The name of class is HardCovers
Publication[2] is Title Time, Price 2.4, Cost 1.5 quantity 100The name of class is Magazines
Publication[3] is Title Morning Dove, Price 21.0, Cost 15.0 quantity 39The name of class is HardCovers
Publication[4] is Title Nerd, Price 4.8, Cost 3.0 quantity 10The name of class is Magazines
Publication[5] is Title Walking and Chewing Gum forDummies, Price 19.59, Cost 14.0 quantity 40The name of class is HardC
overs
Publication[6] is Title New Yorker, Price 3.6, Cost 2.25 quantity 28The name of class is Magazines
Publication[7] is Title J++ Programming, Price 37.0, Cost 30.0 quantity 55The name of class is HardCovers
Publication[8] is Title Divorced, Price 2.8, Cost 1.75 quantity 33The name of class is Magazines
Publication[9] is Title Doing Nothing for Dummies, Price 14.0, Cost 10.0 quantity 10The name of class is HardCovers
```

```
D:\Spring 2017\IT 2650\Assignment Solutions\Assign 6>java PublicationArray>
```

In addition to the requirements stated in this Exercise you should do the following:

- The source file becomes an important part of the documentation for any program solution. Make sure you follow indentation guidelines as demonstrated in the text. The source files should be clear and easy to read. Make sure you begin each class with a comment of you IT 2650, Your name, CRN 13906, the due date, and Spring 2017, the assignment number, and the purpose of the class. Also places comments in other parts of your code which may need clarification to the reader. Save all the source files from Part 2 in a folder named Assign6Part2. Include this folder in the Zip file referred to in Part 1 above.
- Send the zip file to me via an attachment to email (make sure you include IT 2650 in the subject area of the email) before 12 midnight of the Due date. **Late assignments will not be graded and will receive zero points.**

Failure to follow instructions for this assignment will result in deduction of points.

IF you have any questions about the requirements of this assignment, contact the instructor by email John.Malone@Tri-c.edu or phone 216-987-2458.