Preparatory Exercises for Java Lab session – 4

Topics: Arrays of Objects, static variables, static and instance methods, constructor overloading
PREPARATORY EXERCISES

1. Define a class called **Book** with data members : title(String), author(String), year of publication(int),number of copies(int),edition(int) and price(double). The member methods are: *set* and *get* methods, constructor with five arguments, default constructor and **toString()** to display the details of the book. The member variables and methods are public.

2. Create a void **display()** to print the details of the object Book using System.out.printf() Define a **TestBook** class to create an array objects of Book and initialize the array of Book and print the details of the book using for-each loop. In class TestBook, define a static method void display(Book) that prints the details of the Book.

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WHILE IN LAB (WEEK-4)

In Class Book:

3. Define a method Boolean checkDup(Book []) that checks whether duplicate details of book exist in the array of Book. If duplicate Book exists, delete the Book from the array by resetting member variables to default value.

4. Define a static variable double discount that indicates the percentage of discount applied when a book is purchased. Include a static method modifyDiscount(double) that modifies the discount. Modify constructor with arguments such that it prints error if price or number copies is initialised with negative or zero value.

5. Include int findCopies(String) that returns the number of copies for the given title passed as an argument, if not found -1. Include String[] authoredBooks(String) that stores the title of Book written by author passed as an argument and returns it.