

Assignments

1. Define a class Rectangle with its length and breadth.

Provide appropriate constructor(s), which gives facility of constructing rectangle object with default values of length & breadth as 0 or passing value of length and breadth externally to constructor.

- Provide appropriate accessor & mutator methods to Rectangle class.
- Provide methods to calculate area & to display all information of Rectangle.

Design different class TestRectangle class in separate source file, which will contain main function. From this main function, create 3 Rectangle objects by taking all necessary information from the user.

2. Write a program that Create a class Book which describes book_title, book_price, book_author and book_publication. Use getter and setter methods to get & set the Books description.

Write a program that Create class BookManager with createBooks and showBooks methods to create n objects of Book in an array. Display the books along with its description as follows:-

Book Title	Price
Java Programming	Rs.350.50
Let Us C	Rs.200.00

3. Write a program that -:
 - i. Create a class Medicine to represent a drug manufactured by a pharmaceutical company. Provide a function displayLabel() in this class to print Name and address of the company.
 - ii. Derive Tablet, Syrup and Ointment classes from the Medicine class. Override the displayLabel() function in each of these classes to print additional information suitable to the type of medicine. For example, in case of tablets, it could be “store in a cool dry place”, in case of ointments it could be “for external use only” etc.
 - iii. Create a class TestMedicine. Write main function to do the following:
 - a. Declare an array of Medicine references of size 10
 - b. Create a medicine object of the type as decided by a randomly generated integer in the range 1 to 3.
 - c. Refer Java API Documentation to find out random generation feature.
 - d. Check the polymorphic behavior of the displayLabel() method.