1. Create a class Doctor with instance variables (name, doctorid, no-patients). The attribute no-patients is an integer to keep track of the number of patients registered with the doctor. Create another class DoctorMain which will contain the public static void main method. In main, you should create at least three doctor instances (random names and no-patients hardcoded). Create one or more static variable(s) in Doctor class. You should keep track of all instances created in that static array. Create another static method in Doctor class, for computing the average no-patients based on the instances in the array.
2. Write a java program that implements the following classes:

**Class Book:**

Fields: Title (String), author, isbn (int), available (Boolean - default is true), borrowedBy (int - default is 0)

Constructor: with arguments to initialize books

Methods:

* toString - to print book details

**Class Library:**

Fields: Array of Books

Constructor (default / parameterized) : initialize the array of Books with hard coded inputs

Methods:

* + - borrowBook (isbn, userid) – to implement a user with the given id borrowing the book with the given isbn Eg.: if borrowBook (1001, 5) is invoked, the borrowedBy field of the book with isbn = 1001 should be set to 5. Also, the available status of the book should become false.
    - returnBook (isbn, userid) – set available status of book with given isbn to true and set borrowedBy field to 0.
    - showBooks() – print the details of all available books
    - Other methods can be added as required

Note: Main method need not be written.