# Java module 3

Exercises Day 1 (B)

| 1 - Classes and Objects | Create the classes |
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| Instructions | We will create a program to manage a library.<br><br>Step 1: Create the Book class with its properties. Add at least properties to store:<br>● The title of the book.<br>● The author of the book.<br>● The ISBN number of the book.<br>● The last customer that took the book.<br><br>Step 2: Create the Customer class with its properties. Add at least properties to store:<br>● The customer's name.<br>● The customer's birthdate. (Use java.util.LocalDate)<br><br>Step 3: Modify the Book class to store a reference to a Customer (for the last customer that took the book). |

| 2 - Classes and Objects | Adding methods |
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| Instructions | Let's continue creating the program to manage a library.<br><br>Step 1: Create the constructor method for the Book and Customer classes created in the previous exercise.<br><br>Step 2: Create a main library class from where the Bookkeeper is able to add a book to the system. Note that a new book won't have been taken by any customer yet.<br><br>Step 3: Run the program and take a look at the object that was created using the debugger. |
| Expected output | Book name:<br>>>> Harry Potter<br>Book author:<br>>>> J. K. Rowling<br>Book ISBN:<br>>>> 978-0590353427<br>The book was added. |

| 3 - Classes and Objects | Adding methods |
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| Instructions | Let's continue creating the program to manage a library. |
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| | Step 1: Modify all properties of the Book and Customer classes to be private. Create getter and setter methods for each property. |
| | Step 2: Create a method called "print" for the Book class that will print the book information with the following format:<br>**Book title by Book author. ISBN: isbn-number.** |
| | Step 3: Update the main library program such that it will print the book information after adding it. |
| | Step 4: Update the main library program such that it will allow the Bookkeeper to enter the information of the customer that will take the book. |
| | Step 3: Run the program and take a look at the objects that were created using the debugger. |
| Expected output | Book name:<br>>>> Harry Potter<br>Book author:<br>>>> J. K. Rowling<br>Book ISBN:<br>>>> 978-0590353427<br>The book was added. Book information: Harry Potter by J. K. Rowling. ISBN: 978-0590353427.<br>Enter the customer name:<br>>>> John Green<br>Enter the customer birth day:<br>>>> 20<br>Enter the customer birth month:<br>>>> 5<br>Enter the customer birth year:<br>>>> 1990<br>Book updated with customer information. |