Java module 3

Exercises Day 1 (A)

1 - Classes and Objects	Create the class Book
Instructions	We will create a program to manage a library. Step 1: Create the Book class with its properties. Add at least properties to store: ● The title of the book. ● The author of the book. ● The ISBN number of the book.

Solution	`public class Book {`
	`  public String title;`
	`  public String author;`
	`  public String isbn;`
	`}`

2 - Classes and Objects	Adding methods
Instructions	Let's continue creating the program to manage a library. Step 1: Create the constructor method for the Book class created in the previous exercise. Step 2: Create a main library class from where the Bookkeeper is able to add a book to the system. Step 3: Run the program and take a look at the object that was created using the debugger.

Expected output	Book name:
	>>> Harry Potter
	Book author:
	>>> J. K. Rowling
	Book ISBN:
	>>> 978-0590353427
	The book was added.

Solution Book.java	`public class Book {`
	
	`  public String title;`
	`  public String author;`
	`  public String isbn;`

```
    public Book(String title, String author, String isbn) {
        this.title = title;
        this.author = author;
        this.isbn = isbn;
    }
}
```

Solution Library.java

```
import java.util.Scanner;

public class Library {

    public static void main(String[] args){

        Scanner myScanner = new Scanner(System.in);

        System.out.print("Book title: ");
        String bookTitle = myScanner.nextLine();

        System.out.print("Book author: ");
        String bookAuthor = myScanner.nextLine();

        System.out.print("Book ISBN: ");
        String bookISBN = myScanner.nextLine();

        Book book = new Book(bookTitle, bookAuthor,
bookISBN);
        System.out.println("The book was added.");
        myScanner.close();
    }
}
```

3 - Classes and Objects	Adding methods
Instructions	Let's continue creating the program to manage a library. Step 1: Modify all properties of the Book class 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: **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.

Expected output	Book name:
	>>> Harry Potter
	Book author:
	>>> J. K. Rowling
	Book ISBN:
	>>> 978-0590353427
	The book was added. Book information: Harry Potter by J. K. Rowling. ISBN: 978-0590353427.

Solution Book.java	

```java
public class Book {

    private String title;
    private String author;
    private String isbn;

    public Book(String title, String author, String isbn) {
        this.title = title;
        this.author = author;
        this.isbn = isbn;
    }

    public String getTitle() {
        return title;
    }

    public void setTitle(String title) {
        this.title = title;
    }

    public String getAuthor() {
        return author;
    }

    public void setAuthor(String author) {
        this.author = author;
    }

    public String getIsbn() {
        return isbn;
    }
```

```
    public void setIsbn(String isbn) {
        this.isbn = isbn;
    }

    public void print() {
        System.out.println(title + " by " + author + ".
ISBN: " + isbn);
    }
}
```

Solution
Library.java

```
import java.util.Scanner;

public class Library {

    public static void main(String[] args){

        Scanner myScanner = new Scanner(System.in);

        System.out.print("Book title: ");
        String bookTitle = myScanner.nextLine();

        System.out.print("Book author: ");
        String bookAuthor = myScanner.nextLine();

        System.out.print("Book ISBN: ");
        String bookISBN = myScanner.nextLine();

        Book book = new Book(bookTitle, bookAuthor,
bookISBN);
        System.out.print("The book was added. ");
        book.print();
        myScanner.close();
    }
}
```