Vidyavardhini's College Of Engineering & Technology, Vasai

ASSIGNMENT NO. 1

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NAME: CHETAN BHUYAL   **ROLL NO.** : 16

DATE :   **SUBJECT :** FULL STACK JAVA PROGRAMING

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QUESTION

In a library system, each book has details like title, author, ISBN, and availability status.

· **Class: Template or blueprint (**`Book`**) defining properties and behaviors.**

· **Object: Real-world instance (**`book1`, `book2`**) created using the class.**

· **Constructor: Initializes object with values.**

· **Method: Performs actions (**`displayInfo()` **shows book details).**

CODE

```
public class Main {

   // --- Book class ---

   static class Book {

       String title;

       String author;

       String ISBN;
```

```java
    boolean isAvailable;

    // Constructor
    Book(String title, String author, String ISBN, boolean isAvailable)
{
        this.title = title;

        this.author = author;

        this.ISBN = ISBN;

        this.isAvailable = isAvailable;

    }

    // Method to display book info
    void displayInfo() {
        System.out.println("Title: " + title);

        System.out.println("Author: " + author);

        System.out.println("ISBN: " + ISBN);

        System.out.println("Available: " + (isAvailable ? "Yes" : "No"));

        System.out.println();

    }

    // Method to borrow book
    void borrowBook() {
```

```java
        if (isAvailable) {

            isAvailable = false;

            System.out.println("You borrowed: " + title);

        } else {

            System.out.println("Sorry, " + title + " is not available.");

        }

    }


    // Method to return book

    void returnBook() {

        isAvailable = true;

        System.out.println("You returned: " + title);

    }

}


    // --- Main method ---

    public static void main(String[] args) {

        // Create Book objects

        Book book1 = new Book("The Alchemist", "Paulo Coelho", "9780061122415", true);

        Book book2 = new Book("Java Programming", "Herbert Schildt", "9781260440218", false);
```

```java
        // Display book info

        book1.displayInfo();

        book2.displayInfo();


        // Borrow and return example

        book1.borrowBook();

        book2.borrowBook();

        book1.returnBook();


        // Final status

        System.out.println();

        book1.displayInfo();

        book2.displayInfo();
    }
}
```

OUTPUT :

Title: Java Programming
Author: Herbert Schildt
ISBN: 9781260440218
Available: No