Assignment-2

Problem-1: **StudentRecordManager**

Create a Java class called **StudentRecordManager** to manage a list of student records. Each student record will have the following attributes:

1. **studentId**: An integer representing the unique ID of the student.

2. **name**: A string representing the name of the student.

3. **marks**: An array of integers representing the marks obtained by the student in different subjects.

Your **StudentRecordManager** class should have the following methods:

1. **public static double calculateAverage(int[] marks)**: Accepts an array of integers (marks) and returns the average of all marks.

2. **public static int findMax(int[] marks)**: Accepts an array of integers (marks) and returns the maximum mark.

3. **public static int findMin(int[] marks)**: Accepts an array of integers (marks) and returns the minimum mark.

4. **public static void displayStudentDetails(int studentId, String name, int[] marks)**: Accepts student ID, name, and an array of marks, and displays the student's details along with the calculated average, maximum, and minimum marks.

Hints: The main method looks like followings:

public class Main {

  public static void main(String[] args) {

    int[] marks1 = {80, 85, 90, 75, 95};

    int[] marks2 = {70, 65, 80, 75, 60};

    StudentRecordManager.displayStudentDetails(101, "Alice", marks1);

    StudentRecordManager.displayStudentDetails(102, "Bob", marks2);

  }

```
}
```

Output:

Student Details:

ID: 101

Name: Alice

Marks: [80, 85, 90, 75, 95]

Average Marks: 85.0

Maximum Mark: 95

Minimum Mark: 75

Student Details:

ID: 102

Name: Bob

Marks: [70, 65, 80, 75, 60]

Average Marks: 70.0

Maximum Mark: 80

Minimum Mark: 60

Problem-2: LibraryManagementSystem

Create a Java class called Library to manage a library system. The class should have the following attributes:
books: An array of strings representing the titles of books available in the library.
issuedBooks: An array of strings representing the titles of books currently issued to library members.

Your Library class should have the following methods:
public void addBook(String bookTitle): Accepts a book title as a parameter and adds it to the books array.
public void issueBook(String bookTitle): Accepts a book title as a parameter and issues the book by removing it from the books array and adding it to the issuedBooks array.
public void returnBook(String bookTitle): Accepts a book title as a parameter and returns the book by removing it from the issuedBooks array and adding it back to the books array.
public void displayAvailableBooks(): Displays the list of books available in the library.
public void displayIssuedBooks(): Displays the list of books currently issued to library members.

Hints:

```
public class Main {
    public static void main(String[] args) {
        Library library = new Library();

        // Adding books to the library
        library.addBook("Book 1");
        library.addBook("Book 2");
        library.addBook("Book 3");

        // Displaying available books
        System.out.println("Available Books:");
        library.displayAvailableBooks();

        // Issuing a book
        library.issueBook("Book 1");

        // Displaying available and issued books
        System.out.println("\nAvailable Books:");
        library.displayAvailableBooks();
        System.out.println("\nIssued Books:");
        library.displayIssuedBooks();

        // Returning a book
        library.returnBook("Book 1");
```

```
        // Displaying available and issued books
        System.out.println("\nAvailable Books:");
        library.displayAvailableBooks();
        System.out.println("\nIssued Books:");
        library.displayIssuedBooks();
    }
}
```

Output:
Available Books:
1. Book 1
2. Book 2
3. Book 3

Available Books:
1. Book 2
2. Book 3

Issued Books:
1. Book 1

Available Books:
1. Book 1
2. Book 2
3. Book 3

Issued Books: