Lab 8: Recursion

Introduction

As we discussed in lecture, about the `reverse()` method that reverse a given array. This method is going to call a recursive method named `recursive_reverse()`. Your job is to implement the `recursive_reverse()` method.

So, for this lab, create a Java program named Lab08.java using the following template:

```
public class Lab08
{
    public static void reverse(int[] data)
    {
        recursive_reverse(data, 0, data.length - 1);
    }

    public static void recursive_reverse(int[] data, int firstIndex, int lastIndex)
    {
    }

    public static void showIntArray(int[] data)
    {
    }

    public static void main(String[] args)
    {
        int[] myData = {12, 5, 7, 2, 6, 32, 1, 9, 44};
        showIntArray(myData);
        reverse(myData);
        showIntArray(myData);
    }
}
```

What to do

Complete the following tasks:

- (3 points): Implement the `showIntArray()` method so that it will display the array in the following format:

  ```
  [12, 5, 7, 2, 6, 32, 1, 9, 44]
  ```

- (7 points): Implement the `recursive_reverse()` method.

Note that both methods must be able to work with any size array of integers. When the TA grades your work, he/she will modify the array `data` to a different size and values. If both methods are implemented correctly, the output should look like the following:

```
[12, 5, 7, 2, 6, 32, 1, 9, 44]
[44, 9, 1, 32, 6, 2, 7, 5, 12]
```

Due Date and Submission

Once you completed the program, you must demonstrate your program for your Lab TA. Once your TA already checked you, **DO NOT FORGET** to submit your `Lab08.java` file to the CourseWeb under this lab by the due date.

If you do not complete the lab this week, you may finish it and submit your code to the CourseWeb before the due date. However, you need to demonstrate it to your TA at the beginning of next week's lab.

No late submission will be accepted.