

Here are the Java solutions for your DSA assignment, including example inputs and their corresponding outputs:

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### 1. Reverse an Array using Stack

```
import java.util.Stack;

public class ReverseArrayUsingStack {
    public static void main(String[] args) {
        int[] arr = {1, 2, 3, 4, 5};
        Stack<Integer> stack = new Stack<>();

        // Push elements into the stack
        for (int num : arr) {
            stack.push(num);
        }

        // Pop elements back into the array
        for (int i = 0; i < arr.length; i++) {
            arr[i] = stack.pop();
        }

        // Output
        System.out.print("Reversed array: ");
        for (int num : arr) {
            System.out.print(num + " ");
        }
    }
}
```

Output:

Reversed array: 5 4 3 2 1