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Stacks & Queues\ITITSB22029_DoMinhDuy_Lab3\Problem 1\Main.java

```
1 // Problem 1: Simple stack application
2 // Convert a decimal number and convert it to octal form.
3 // Concatenate two stacks.
4 // Determine if the contents of one stack are identical to that of another.
5
6 import java.util.Stack;
7
8 public class Main {
9     public static void main(String[] args) {
10         // Create a stack
11         Stack<Integer> stack = new Stack<>();
12
13         // Push elements to the stack
14         stack.push(10);
15         stack.push(20);
16         stack.push(30);
17         stack.push(40);
18         stack.push(50);
19         System.out.println("Stack: " + stack);
20
21         // Convert the decimal number to octal
22         int decimal = 18;
23         System.out.println("Decimal: " + decimal);
24         System.out.println("Octal: " + Integer.toOctalString(decimal));
25
26         // Concatenate two stacks
27         Stack<Integer> stack1 = new Stack<>();
28         stack1.push(10);
29         stack1.push(20);
30         stack1.push(30);
31
32         Stack<Integer> stack2 = new Stack<>();
33         stack2.push(40);
34         stack2.push(50);
35
36         stack1.addAll(stack2);
37         System.out.println("Concatenated stack: " + stack1);
38
39         // Determine if the contents of one stack are identical to that of another
40         Stack<Integer> stack3 = new Stack<>();
41         stack3.push(10);
42         stack3.push(20);
43         stack3.push(30);
44
45         Stack<Integer> stack4 = new Stack<>();
46         stack4.push(10);
47         stack4.push(20);
```

```
48         stack4.push(30);
49
50         System.out.println("Stack 3: " + stack3);
51         System.out.println("Stack 4: " + stack4);
52         System.out.println("Are the stacks identical? " + stack3.equals(stack4));
53     }
54 }
```