

Name: Chandrahasa B

Student code: AF0336567

Batch Code: ANP-C6315

Lab Assignment – 12

Collection 2

Question 1: Create a Stack class object, utilize a Stack collection and demonstrate the use of both List and Stack methods. Display the result in the console.

Input:

```
import java.util.List;
import java.util.Stack;

public class StackExample {
    public static void main(String[] args) {
        // Create a Stack object
        Stack<String> stack = new Stack<>();

        // Push elements onto the stack
        stack.push("Element 1");
        stack.push("Element 2");
        stack.push("Element 3");

        // Display the original stack
        System.out.println("Original Stack: " + stack);

        // Use List methods on the Stack
        List<String> stackAsList = stack;
```

```
// Add an element at the top using List method
stackAsList.add("Element 4");

// Display the stack after adding an element using List method
System.out.println("Stack after adding Element 4 using List method: " + stack);

// Pop an element using Stack method
String poppedElement = stack.pop();

// Display the popped element and the updated stack
System.out.println("Popped Element: " + poppedElement);
System.out.println("Stack after popping an element using Stack method: " + stack);
}
}
```

Output:

Original Stack: [Element 1, Element 2, Element 3]

Stack after adding Element 4 using List method: [Element 1, Element 2, Element 3, Element 4]

Popped Element: Element 4

Stack after popping an element using Stack method: [Element 1, Element 2, Element 3]