Question **1**

Correct

Marked out of 1.00

Given an ArrayList, the task is to get the first and last element of the ArrayList in Java.

```
Input: ArrayList = [1, 2, 3, 4]
Output: First = 1, Last = 4

Input: ArrayList = [12, 23, 34, 45, 57, 67, 89]
Output: First = 12, Last = 89
```

Approach:

1. Get the ArrayList with elements.
2. Get the first element of ArrayList using the get(index) method by passing index = 0.
3. Get the last element of ArrayList using the get(index) method by passing index = size – 1.

Answer: (penalty regime: 0 %)

```java
import java.util.ArrayList;
import java.util.Scanner;

public class FirstLastElement {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        // Input the number of elements in the ArrayList
        int n = scanner.nextInt();

        // Create the ArrayList and input elements
        ArrayList<Integer> list = new ArrayList<>();
        for (int i = 0; i < n; i++) {
            list.add(scanner.nextInt());
        }

        // Print the ArrayList in the requested format
        System.out.println("ArrayList: " + list);

        // Output the first and last elements in the required format
        if (!list.isEmpty()) {
            System.out.println("First : " + list.get(0) + ", Last : " + list.get(list.size() - 1));
        }

        scanner.close();
    }
}
```

	Test	Input	Expected	Got	
✓	1	6 30 20 40 50 10 80	ArrayList: [30, 20, 40, 50, 10, 80] First : 30, Last : 80	ArrayList: [30, 20, 40, 50, 10, 80] First : 30, Last : 80	✓
✓	2	4 5 15 25 35	ArrayList: [5, 15, 25, 35] First : 5, Last : 35	ArrayList: [5, 15, 25, 35] First : 5, Last : 35	✓

Passed all tests! ✓

Question **2**

Correct

Marked out of 1.00

The given Java program is based on the ArrayList methods and its usage. The Java program is partially filled. Your task is to fill in the incomplete statements to get the desired output.

list.set();

list.indexOf());

list.lastIndexOf())

list.contains()

list.size());

list.add();

list.remove();

The above methods are used for the below Java program.

Answer: (penalty regime: 0 %)

Reset answer

```
import java.util.ArrayList;
import java.util.Scanner;

class prog{

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        // Read the number of elements in the list
        int n = sc.nextInt();

        // Create an ArrayList to store integers
        ArrayList<Integer> list = new ArrayList<Integer>();

        // Add n elements to the ArrayList
        for (int i = 0; i < n; i++) {
            list.add(sc.nextInt());
        }

        // Printing the initial value of ArrayList
        System.out.println("ArrayList: " + list);

        // Replacing the element at index 1 with 100
        list.set(1, 100);  // Replaces the element at index 1 with 100

        // Getting the index of the first occurrence of 100
        System.out.println("Index of 100 = " + list.indexOf(100));

        // Getting the index of the last occurrence of 100
        System.out.println("LastIndex of 100 = " + list.lastIndexOf(100));

        // Check whether 200 is in the list or not
        System.out.println(list.contains(200));  // Output: false

        // Print ArrayList size
        System.out.println("Size Of ArrayList = " + list.size());

        // Inserting 500 at index 1
        list.add(1, 500);  // Inserts 500 at index 1

        // Removing an element from position 3
        list.remove(3);  // Removes the element at index 3

        // Print the final ArrayList
        System.out.println("ArrayList: " + list);
    }
}

```

	Test	Input	Expected	Got	
✓	1	5 1 2 3 100 5	ArrayList: [1, 2, 3, 100, 5] Index of 100 = 1 LastIndex of 100 = 3 false Size Of ArrayList = 5 ArrayList: [1, 500, 100, 100, 5]	ArrayList: [1, 2, 3, 100, 5] Index of 100 = 1 LastIndex of 100 = 3 false Size Of ArrayList = 5 ArrayList: [1, 500, 100, 100, 5]	✓

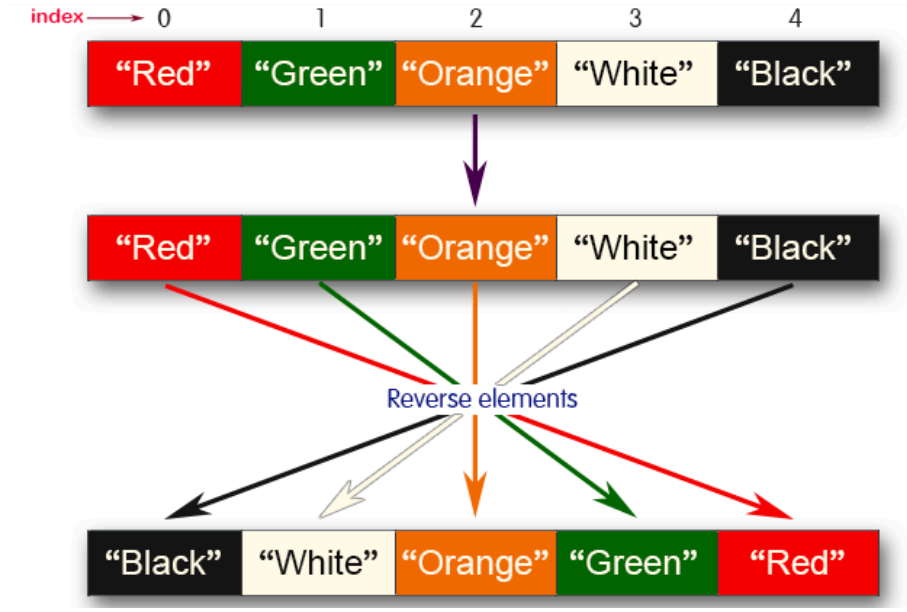
Passed all tests! ✓

Question **3**

Correct

Marked out of 1.00

Write a Java program to reverse elements in an array list.




```
Sample input and Output:
Red
Green
Orange
White
Black
Sample output
List before reversing :
[Red, Green, Orange, White, Black]
List after reversing :
[Black, White, Orange, Green, Red]
```

Answer: (penalty regime: 0 %)

```
1  import java.util.ArrayList;
2  import java.util.Collections;
3  import java.util.Scanner;
4
5  public class ReverseArrayList {
6
7      public static void main(String[] args) {
8
9          Scanner sc = new Scanner(System.in);
10
11
12         ArrayList<String> colors = new ArrayList<String>();
13
14
15
16         int n = sc.nextInt();
17         sc.nextLine();
18
19
20
21         for (int i = 0; i < n; i++) {
22             String color = sc.nextLine();
23             colors.add(color);
24         }
25
26         // Print the list before reversing
27         System.out.println("List before reversing :");
28         System.out.println(colors);
29
30         // Reverse the list using Collections.reverse()
31         Collections.reverse(colors);
32
```

```
        // Print the list after reversing
        System.out.println("List after reversing :");
        System.out.println(colors);
    }
}
```

	Test	Input	Expected	Got	
✓	1	5 Red Green Orange White Black	List before reversing : [Red, Green, Orange, White, Black] List after reversing : [Black, White, Orange, Green, Red]	List before reversing : [Red, Green, Orange, White, Black] List after reversing : [Black, White, Orange, Green, Red]	✓
✓	2	4 CSE AIML AIDS CYBER	List before reversing : [CSE, AIML, AIDS, CYBER] List after reversing : [CYBER, AIDS, AIML, CSE]	List before reversing : [CSE, AIML, AIDS, CYBER] List after reversing : [CYBER, AIDS, AIML, CSE]	✓

Passed all tests! ✓

◄ Lab-10-MCQ

Jump to...

Lab-11-MCQ ►