Status	Finished
Started	Friday, 8 November 2024, 10:27 AM
Completed	Friday, 8 November 2024, 11:03 AM
Duration	35 mins 40 secs

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 %)

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

public class FirstAndLastElement {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ArrayList<Integer> list = new ArrayList<>();


        int n = scanner.nextInt();


        for (int i = 0; i < n; i++) {
            list.add(scanner.nextInt());
        }

        if (!list.isEmpty()) {
            int firstElement = list.get(0);
            int lastElement = list.get(list.size() - 1);

            System.out.println("ArrayList: " + list);
            System.out.println("First : " + firstElement + ", Last : " + lastElement);
        } else {
            System.out.println("The ArrayList is empty.");
        }

        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	✓

	Test	Input	Expected	Got	
✓	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;

public class Prog {
    public static void main(String[] args) {
        // Scanner to take input
        Scanner sc = new Scanner(System.in);

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

        // Initialize the ArrayList
        ArrayList<Integer> list = new ArrayList<Integer>();

        // Reading n elements and adding them to the list
        for (int i = 0; i < n; i++) {
            list.add(sc.nextInt());
        }

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

        // Replacing the element at index 1 with 100 (if index exists)
        if (list.size() > 1) {
            list.set(1, 100);
        }

        // Getting the index of first occurrence of 100
        int firstIndexOf100 = list.indexOf(100);
        System.out.println("Index of 100 = " + firstIndexOf100);

        // Getting the index of last occurrence of 100
        int lastIndexOf100 = list.lastIndexOf(100);
        System.out.println("LastIndex of 100 = " + lastIndexOf100);

        // Check whether 200 is in the list or not
        boolean contains200 = list.contains(200);
        System.out.println(contains200);

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

        // Inserting 50 at index 1
        list.add(1, 500);

```

```
46          // Removing an element from position 3 (if index exists)
47          if (list.size() > 3) {
48              list.remove(3);
49          }
50
51          // Printing the ArrayList after modifications
52          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]	✓

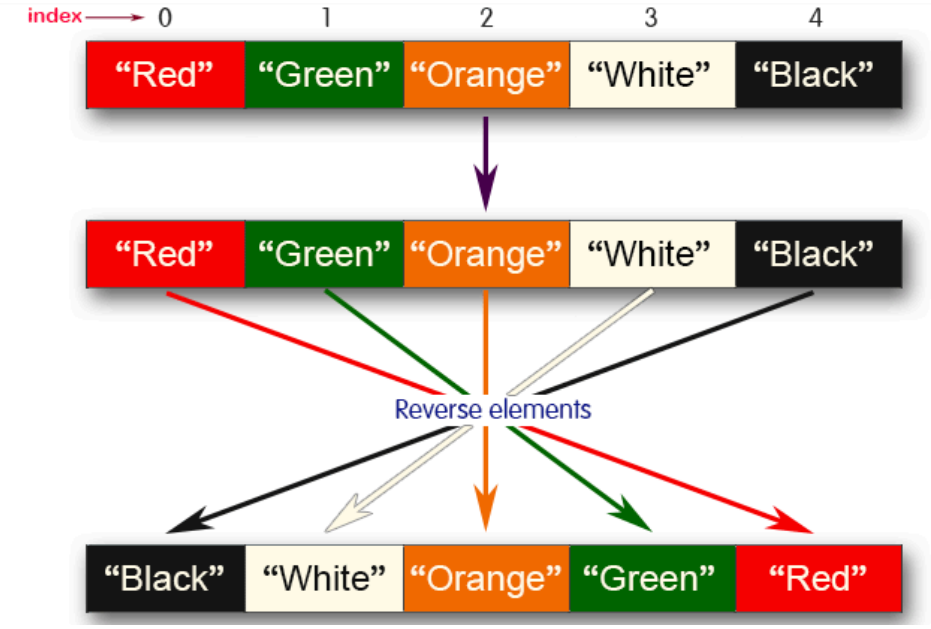
Passed all tests! ✓

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 %)

```
import java.util.*;
public class ReverseList {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);
// Ask the user for the number of colors they want to input
int n = scanner.nextInt();
scanner.nextLine(); // Consume the newline character left by nextInt()
List<String> colors = new ArrayList<>();
for (int i = 0; i < n; i++) {
    String color= scanner.nextLine();
    colors.add(color);
}
// Display the list before reversing
System.out.println("List before reversing : \n" + colors);
Collections.reverse(colors);
// Display the list after reversing
System.out.println("List after reversing :\n" + colors);
// close the scanner scanner.close();
}

}

```

	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 ►