

[Dashboard](#) / [My courses](#) / [CS23333-OOPUI-2023](#) / [Lab-10- Collection- List](#) / [Lab-10-Logic Building](#)

| | |
|------------------|-------------------------------------|
| Status | Finished |
| Started | Tuesday, 12 November 2024, 11:21 AM |
| Completed | Tuesday, 12 November 2024, 1:21 PM |
| Duration | 2 hours |

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 %)

```

1 import java.util.ArrayList;
2 import java.util.Scanner;
3
4 public class FirstAndLastElement {
5     public static void main(String[] args) {
6         Scanner scanner = new Scanner(System.in);
7         ArrayList<Integer> list = new ArrayList<>();
8
9         // Read the size of the ArrayList
10
11         int n = scanner.nextInt();
12
13         // Populate the ArrayList
14
15         for (int i = 0; i < n; i++) {
16             list.add(scanner.nextInt());
17         }
18
19         // Display the ArrayList
20         System.out.println("ArrayList: " + list);
21
22         // Check if the list is empty to avoid errors
23         if (!list.isEmpty()) {
24             // Get the first and last elements
25             int firstElement = list.get(0);
26             int lastElement = list.get(list.size() - 1);
27
28             // Print the result
29             System.out.println("First : " + firstElement + ", Last : " + lastElement);
30         } else {
31             System.out.println("The ArrayList is empty.");
32         }
33
34         scanner.close();
35     }
36 }
37

```

| | 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

```
1 import java.util.ArrayList;
2 import java.util.Scanner;
3
4 public class Prog {
5
6     public static void main(String[] args)
7     {
8         Scanner sc= new Scanner(System.in);
9         int n = sc.nextInt();
10
11         ArrayList<Integer> list = new ArrayList<Integer>();
12
13         for(int i = 0; i<n;i++)
14             list.add(sc.nextInt());
15
16         // printing initial value ArrayList
17         System.out.println("ArrayList: " + list);
18
19         //Replacing the element at index 1 with 100
20         list.set(1,100);
21
22         //Getting the index of first occurrence of 100
23         System.out.println("Index of 100 = " + list.indexOf(100));
24
25         //Getting the index of last occurrence of 100
26         System.out.println("LastIndex of 100 = " + list.lastIndexOf(100) );
27         // Check whether 200 is in the list or not
28         System.out.println(list.contains(200) ); //Output : false
29         // Print ArrayList size
30         System.out.println("Size Of ArrayList = "+list.size() );
31         //Inserting 500 at index 1
32         list.add(1,500); // code here
33         //Removing an element from position 3
34         list.remove(3); // code here
35         System.out.print("ArrayList: " + list);
36     }
37 }
```

| | 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] | ✓ |

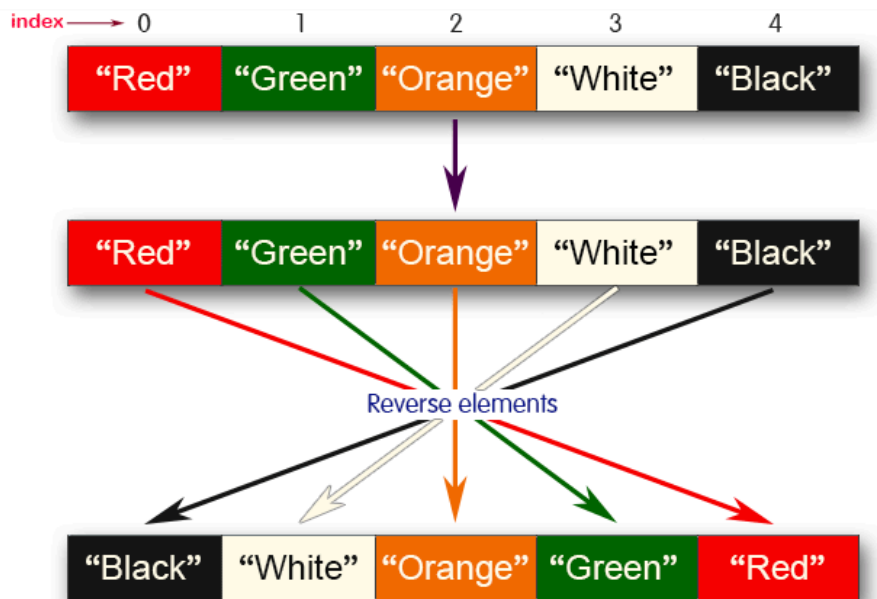
Passed all tests! ✓

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 public class ReverseStringArrayList {
5     public static void main(String[] args) {
6         Scanner scanner = new Scanner(System.in); ArrayList<String> arrayList = new ArrayList<>();
7         int n = scanner.nextInt();
8         scanner.nextLine();
9         for (int i = 0; i < n; i++) {
10             String element = scanner.nextLine();
11             arrayList.add(element);
12         }
13         System.out.println("List before reversing :");
14         System.out.println(arrayList); Collections.reverse(arrayList);
15         System.out.println("List after reversing :");
16         System.out.println(arrayList);
17         scanner.close();
18     }
19 }

```

| | 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](#) ▶