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Status	Finished
Started	Monday, 18 November 2024, 6:18 PM
Completed	Monday, 18 November 2024, 6:34 PM
Duration	15 mins 16 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 %)

```java
1  import java.util.ArrayList;
2  import java.util.Scanner;
3  public class FirstLastElement {
4      public static void main(String[] args) {
5          Scanner scanner = new Scanner(System.in);
6          int size = scanner.nextInt();
7          ArrayList<Integer> list = new ArrayList<>();
8          for (int i = 0; i < size; i++) {
9              int element = scanner.nextInt();
10             list.add(element);
11         }
12         System.out.println("ArrayList: " + list);
13         printFirstAndLast(list);
14     }
15     public static void printFirstAndLast(ArrayList<Integer> list) {
16         if (list != null && !list.isEmpty()) {
17             int first = list.get(0);
18             int last = list.get(list.size() - 1);
19             System.out.println("First : " + first + ", Last : " + last);
20         }else{
21             System.out.println("The list is empty.");
22
23         }
24     }
25 }
```

	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

```java
 1  import java.util.ArrayList;
 2  import java.util.Scanner;
 3  class prog {
 4      public static void main(String[] args) {
 5          Scanner sc = new Scanner(System.in);
 6          int n = sc.nextInt();
 7
 8          ArrayList<Integer> list = new ArrayList<>();
 9
10          for (int i = 0; i < n; i++) {
11              list.add(sc.nextInt());
12          }
13          // Printing initial ArrayList
14          System.out.println("ArrayList: " + list);
15          // Replacing the element at index 1 with 100
16          if (list.size() > 1) {
17              list.set(1, 100);
18          }
19          // Getting the index of first occurrence of 100
20          System.out.println("Index of 100 = " + list.indexOf(100));
21          // Getting the index of last occurrence of 100
22          System.out.println("LastIndex of 100 = " + list.lastIndexOf(100));
23          // Check whether 200 is in the list or not
24          System.out.println(list.contains(200)); // Output: false if 200 is not present
25          // Print ArrayList size
26          System.out.println("Size Of ArrayList = " + list.size());
27          // Inserting 500 at index 1 if the size is greater than 1
28          if (list.size() > 1) {
29              list.add(1, 500);
30          }
31          // Removing an element from position 3 if the size is greater than 3
32          if (list.size() > 3) {
33              list.remove(3);
34          }
35          // Printing the modified ArrayList
36          System.out.println("ArrayList: " + list);
37          // Close scanner
38          sc.close();
39      }
40  }
```

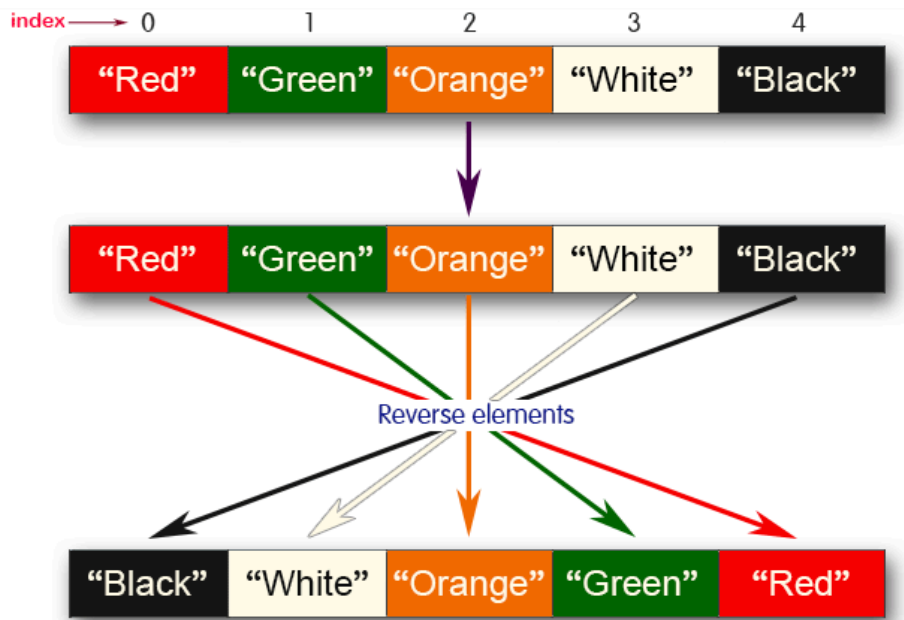|	Test	Input	Expected	Got	
✓	1	5 1 2 3 100 5	ArrayList: [1, 2, 3, 100, 5] Index of 100 = 1 LastIndex of 100 = 3 false Size Of ArrayList = 5 ArrayList: [1, 500, 100, 100, 5]	ArrayList: [1, 2, 3, 100, 5] Index of 100 = 1 LastIndex of 100 = 3 false Size Of ArrayList = 5 ArrayList: [1, 500, 100, 100, 5]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

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 %)

```java
1  import java.util.*;
2
3  public class Exercise11 {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          ArrayList<String> listStrings = new ArrayList<>();
7
8          int n = sc.nextInt();
9          sc.nextLine(); // Consume the newline character
10
11         for (int i = 0; i < n; i++) {
12             String color = sc.nextLine();
13             listStrings.add(color);
14         }
15
16         System.out.println("List before reversing :\n" + listStrings);
17
18         Collections.reverse(listStrings);
19
20         System.out.println("List after reversing :\n" + listStrings);
21
22         sc.close(); // Close the scanner
23     }
24  }
```

	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

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Lab-11-MCQ ►