CS23333-Object Oriented Programming Using Java-2023

Dashboard / My courses / CS23333-OOPUJ-2023 / Lab-10- Collection- List / Lab-10-Logic Building

Quiz navigation



Show one page at a time Finish review

Started Friday, 8 November 2024, 7:12 PM Completed Friday, 8 November 2024, 7:54 PM **Duration** 41 mins 47 secs

Ouestion 1 Marked out of 1.00 ▼ Flag question

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;
     import java.util.Scanner;
4 public class Main {
         public static void main(String[] args) {
5
             Scanner scanner = new Scanner(System.in);
              ArrayList<Integer> list = new ArrayList<>();
8
             int n = scanner.nextInt();
 9
             for (int i = 0; i < n; i++) {
10
                  int element = scanner.nextInt();
11
                  list.add(element);
12
              int first = list.get(0);
13
             int last = list.get(list.size() - 1);
System.out.println("ArrayList: " + list);
System.out.println("First : " + first + ", Last : " + last);
14
15
16
17
              scanner.close();
18
19
20
```

Test	Input	Expected	Got			
1	6 30 20 40 50 10	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 $\bf 2$ Correct Marked out of Flag question

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; import java.util.Scanner; public class Prog { public static void main(String[] args) { 4 Scanner sc = new Scanner(System.in); int n = sc.nextInt(); 6 ArrayList<Integer> list = new ArrayList<>(); 8 for (int i = 0; i < n; i++) { 9 list.add(sc.nextInt()); 10 11 System.out.println("ArrayList: " + list); 12 list.set(1, 100); System.out.println("Index of 100 = " + list.indexOf(100));
System.out.println("LastIndex of 100 = " + list.lastIndexOf(100)); 13 14 System.out.println(list.contains(200));
System.out.println("Size Of ArrayList = " + list.size()); 15 16 17 list.add(1, 500); 18 list.remove(3); 19 System.out.print("ArrayList: " + list); 20 sc.close(); 21 22 23 24

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

Passed all tests!

Question **3**Correct

Marked out of 1.00

Flag question

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 pimport java.util.Scanner;
 2 .
     public class ReverseStringArray {
         public static void main(String[] args) {
 3
 4
             Scanner sc = new Scanner(System.in);
              int n = sc.nextInt();
 5
              sc.nextLine();
 6
              String[] strArray = new String[n];
 7
              for (int i = 0; i < n; i++) {
    strArray[i] = sc.nextLine();</pre>
 8
 9
10
              System.out.println("List before reversing :");
11
              for (int i = 0; i < n / 2; i++) {</pre>
12
13
                  String temp = strArray[i];
strArray[i] = strArray[n - i - 1];
14
15
                  strArray[n - i - 1] = temp;
16
17
              System.out.println("List after reversing :");
System.out.println("[" + String.join(", ", strArray) + "]");
18
19
20
              sc.close();
21
22
     }
23
```

		Test	Input	Expected	Got	
			White Black			
	ſ	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]	
	Pas	ssed al	l tests!			
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◄ Lab-10-MCQ				Jump to	*	Lab-11-MCQ ►