

CS23333-Object Oriented Programming Using Java-2023

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Started	Thursday, 7 November 2024, 9:07 PM
Completed	Thursday, 7 November 2024, 9:29 PM
Duration	21 mins 21 secs

Question **1**

Correct

Marked out of 1.00

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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.*;
2 public class prog{
3     public static void main(String args[]){
4         Scanner sc=new Scanner(System.in);
5         int n=sc.nextInt();
6         sc.nextLine();
7         ArrayList<Integer> al= new ArrayList<Integer>();
8         for(int i=0;i<n;i++){
9             String input = sc.nextLine();
10            int number = Integer.parseInt(input);
11            al.add(number);
12        }
13        System.out.println("ArrayList: "+al);
14        System.out.println("First : "+al.get(0)+" , Last : "+al.get(al.size()-1));
15    }
16 }
17 }
```

	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

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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 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 }
38

```

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

Passed all tests!

Question 3

Correct

Marked out of 1.00

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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.*;
2 public class Reverse {
3     public static void main(String[] args) {
4         ArrayList<String> list = new ArrayList<String>();
5         Scanner sc = new Scanner(System.in);
6         int n = sc.nextInt();
7         sc.nextLine();
8         for (int i = 0; i < n; i++) {
9             String a = sc.nextLine();
10            list.add(a);
11        }
12        System.out.println("List before reversing :");
13        System.out.println(list);
14        Collections.reverse(list);
15        System.out.println("List after reversing :");
16        System.out.println(list);
17        sc.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!

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