

CS23333-Object Oriented Programming Using Java-2023

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| Status | Finished |
| Started | Sunday, 17 November 2024, 12:32 PM |
| Completed | Sunday, 17 November 2024, 12:33 PM |
| Duration | 1 min 6 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 class prog{
3     public static void main(String[] args){
4         Scanner ss=new Scanner(System.in);
5         ArrayList<Integer> arr=new ArrayList<Integer>();
6         int n=ss.nextInt();
7         for(int i=0;i<n;i++){
8             arr.add(ss.nextInt());
9         }
10        System.out.println("ArrayList: "+arr);
11        System.out.println("First : "+arr.get(0)+" , Last : "+arr.get(arr.size()-1));
12    }
13 }
```

| 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

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;
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         for(int i = 0; i<n;i++){
13             list.add(sc.nextInt());
14         }
15         System.out.println("ArrayList: " + list);
16
17         //Replacing the element at index 1 with 100
18         list.set(1,100);
19
20         //Getting the index of first occurrence of 100
21         System.out.println("Index of 100 = "+list.indexOf(100));
22
23         //Getting the index of last occurrence of 100
24         System.out.println("LastIndex of 100 = "+list.lastIndexOf(100));
25         // Check whether 200 is in the list or not
26         System.out.println(list.contains(200)); //Output : false
27         // Print ArrayList size
28         System.out.println("Size Of ArrayList = "+list.size());
29         //Inserting 500 at index 1
30         list.add(1,500); // code here
31         //Removing an element from position 3
32         list.remove(3); // code here
33         System.out.print("ArrayList: " + list);
34     }
35 }
```

| 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

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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 prog{
3     public static void main(String[] args){
4         Scanner ss=new Scanner(System.in);
5         ArrayList<String> arr=new ArrayList<String>();
6         ArrayList<String> rev=new ArrayList<String>();
7         int n=ss.nextInt();
8         for(int i=0;i<n;i++){
9             arr.add(ss.next());
10        }
11        System.out.println("List before reversing :");
12        System.out.println(arr);
13        for(int i=arr.size()-1;i>=0;i--){
14            rev.add(arr.get(i));
15        }
16        System.out.println("List after reversing :");
17        System.out.println(rev);
18    }
19 }
20 }
```

| 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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