# <u>Dashboard</u> / <u>My courses</u> / <u>CS23333-OOPUJ-2023</u> / <u>Lab-10- Collection- List</u> / <u>Lab-10-Logic Building</u>

Status	Finished
Started	Monday, 4 November 2024, 12:06 PM
Completed	Monday, 4 November 2024, 12:38 PM
Duration	31 mins 46 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 %)

```
1 v import java.util.*;
 2 → public class Solution{
 3 •
        public static void main(String [] args){
 4
            Scanner sc = new Scanner(System.in);
 5
            ArrayList<Integer> arr = new ArrayList<>();
 6
            int n = sc.nextInt();
 7
            for(int i=0;i<n;i++)</pre>
 8
             {
 9
                 arr.add(sc.nextInt());
10
            System.out.println("ArrayList: "+arr);
11
            System.out.println("First : "+arr.get(0)+", Last : "+arr.get(n-1));
12
13
        }
   }
14
```

	Test	Input	Expected	Got	
<b>~</b>	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();

The above methods are used for the below Java program.

Answer: (penalty regime: 0 %)

#### Reset answer

list.remove();

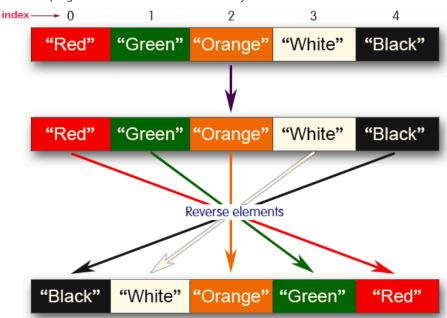
```
1 * import java.util.ArrayList;
     import java.util.Scanner;
 3
 4
    public class Prog {
 5
 6
    public static void main(String[] args)
 7
8
     Scanner sc= new Scanner(System.in);
9
     int n = sc.nextInt();
10
     ArrayList<Integer> list = new ArrayList<Integer>();
11
12
13
     for(int i = 0; i<n;i++)</pre>
14
     list.add(sc.nextInt());
15
     // printing initial value ArrayList
16
17
     System.out.println("ArrayList: " + list);
18
    //Replacing the element at index 1 with 100
19
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
    System.out.println(list.contains(200)); //Output : false
28
29
     // Print ArrayList size
     System.out.println("Size Of ArrayList = "+list.size());
30
31
    //Inserting 500 at index 1
32
    list.add(1,500);
33
                                      // code here
34
     //Removing an element from position 3
35
     list.remove(2);
36
     list.set(2,100);
37
                                    // code here
38
      System.out.print("ArrayList: " + list);
39
     }
40
```

	Test	Input	Expected	Got	
~	1	5	ArrayList: [1, 2, 3, 100, 5] Index of 100 = 1	ArrayList: [1, 2, 3, 100, 5] Index of 100 = 1	~
		2	LastIndex of 100 = 3 false	LastIndex of 100 = 3 false	
		100 5	Size Of ArrayList = 5 ArrayList: [1, 500, 100, 100, 5]	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.*;
 2 •
    public class Solution{
 3
        public static void main(String [] args){
 4
            Scanner sc = new Scanner(System.in);
 5
            int n = sc.nextInt();
 6
            ArrayList<String> list= new ArrayList<>();
 7
            for(int i=0;i<n;i++)</pre>
 8
 9
                 list.add(sc.next());
10
11
            ArrayList<String> list2 = new ArrayList<>();
12
            System.out.println("List before reversing :\n"+list);
13
            for(int i=n-1;i>=0;i--)
14
15
                 list2.add(list.get(i));
16
17
            System.out.println("List after reversing :\n"+list2);
18
19
   }
```

	Test	Input	Expected	Got	
~	1	5 Red Green Orange White Black	List after reversing :	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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