

# CS23333-Object Oriented Programming Using Java-2023

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Started	Sunday, 17 November 2024, 11:13 PM
Completed	Sunday, 17 November 2024, 11:38 PM
Duration	24 mins 54 secs

Question 1

Correct

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:**
- Get the ArrayList with elements.
  - Get the first element of ArrayList using the get(index) method by passing index = 0.
  - 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;
2 import java.util.Scanner;
3
4 public class Main {
5     public static void main(String[] args) {
6         Scanner scanner = new Scanner(System.in);
7
8         int n = scanner.nextInt();
9
10        ArrayList<Integer> list = new ArrayList<>();
11
12        for (int i = 0; i < n; i++) {
13            list.add(scanner.nextInt());
14        }
15
16        System.out.println("ArrayList: " + list);
17        printFirstAndLast(list);
18
19        scanner.close();
20    }
21
22    public static void printFirstAndLast(ArrayList<Integer> list) {
23        if (!list.isEmpty()) {
24            int first = list.get(0);
25            int last = list.get(list.size() - 1);
26            System.out.println("First : " + first + ", Last : " + last);
27        } else {
28            System.out.println("The list is empty.");
29        }
30    }
31 }
```

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 public 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<Integer>();
9         for(int i = 0; i<n;i++){
10             list.add(sc.nextInt());
11
12             // printing initial value ArrayList
13             System.out.println("ArrayList: " + list);
14
15             //Replacing the element at index 1 with 100
16             list.set(1,100);
17
18             //Getting the index of first occurrence of 100
19             System.out.println("Index of 100 = "+list.indexOf(100));
20
21             //Getting the index of last occurrence of 100
22             System.out.println("LastIndex of 100 = "+list.lastIndexOf(100));
23
24             // Check whether 200 is in the list or not
25             System.out.println(list.contains(200)); //Output : false
26
27             // Print ArrayList size
28             System.out.println("Size Of ArrayList = "+list.size());
29
30             //Inserting 500 at index 1
31             list.add(1,500);
32
33             //Removing an element from position 3
34             list.remove(3);
35
36             System.out.print("ArrayList: " + list);
37         }
38     }

```

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

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

```

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	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]

	Test	Input	Expected	Got
		CYBER		

Passed all tests!

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