Aim:

Rahul is working on a program to remove duplicate elements from a list of integers. Write a Java program using ArrayList to assist Rahul in implementing this functionality.

Input Format:

The user will input a list of integers, one by one. The user will enter any non-numeric character to indicate the end of the input.

Output Format:

The first line displays the original list of integers.
The second line is a list with duplicate elements removed.

Source Code:

q29094/DuplicateRemover.java

```java
package q29094;
import java.util.ArrayList;
import java.util.Scanner;

public class DuplicateRemover {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ArrayList<Integer> numbers = new ArrayList<>();

    // write the code..
    while(scanner.hasNextInt()){
        int num = scanner.nextInt();
        numbers.add(num);
    }

        for(int i = 0; i<numbers.size(); i++){
            System.out.print(numbers.get(i));
            if(i<numbers.size() - 1){
                System.out.print(" ");
            }
        }
        System.out.print(" ");

        ArrayList<Integer> uniqueNumbers = new ArrayList<>();
        for(int num : numbers){
            if(!uniqueNumbers.contains(num)){
                uniqueNumbers.add(num);
            }
        }
        System.out.print("\n");
        for(int i = 0; i<uniqueNumbers.size(); i++){
            System.out.print(uniqueNumbers.get(i));
            if(i<uniqueNumbers.size() - 1){
                System.out.print(" ");
            }
        }
        System.out.println(" ");
```

```
        scanner.close();
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
1
2
3
2
2
1
3
4
1
2
s
1 2 3 2 2 1 3 4 1 2
1 2 3 4

Test Case - 2
User Output
-1
-9
25
12
14
62
23
*
-1 -9 25 12 14 62 23
-1 -9 25 12 14 62 23