

Linked List

Assignment 3

```
import java.util.LinkedList;
```

```
import java.util.List;
```

```
class Tester {
```

```
    public static List<Integer> mergeLists(List<Integer> listOne, List<Integer> listTwo) {
```

```
        List<Integer> mergedList = new LinkedList<>();
```

```
        int i = 0, j = 0;
```

```
        int size1 = listOne.size();
```

```
        int size2 = listTwo.size();
```

```
        while (i < size1 && j < size2) {
```

```
            if (listOne.get(i) <= listTwo.get(j)) {
```

```
                mergedList.add(listOne.get(i));
```

```
                i++;
```

```
            } else {
```

```
                mergedList.add(listTwo.get(j));
```

```
                j++;
```

```
            }
```

```
        }
```

```
        // Append remaining elements of listOne
```

```
        while (i < size1) {
```

```
            mergedList.add(listOne.get(i));
```

```

        i++;
    }

    // Append remaining elements of listTwo
    while (j < size2) {
        mergedList.add(listTwo.get(j));
        j++;
    }

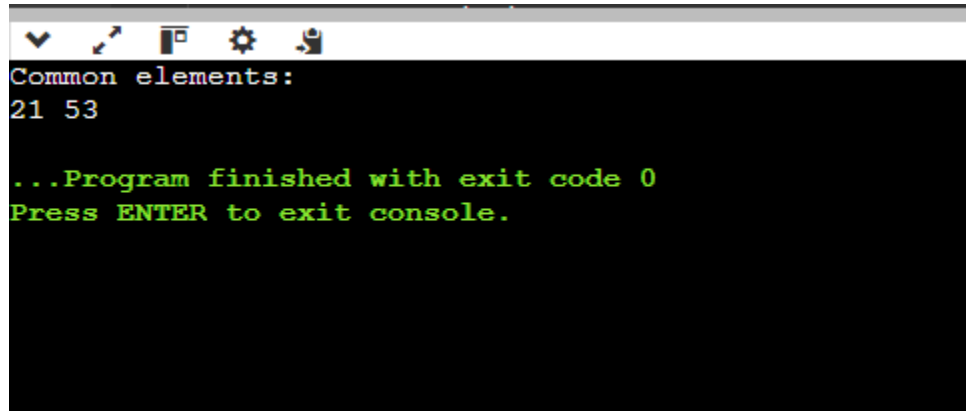
    return mergedList;
}

public static void main(String args[]) {
    List<Integer> listOne = new LinkedList<>();
    listOne.add(10);
    listOne.add(13);
    listOne.add(21);
    listOne.add(42);
    listOne.add(56);

    List<Integer> listTwo = new LinkedList<>();
    listTwo.add(15);
    listTwo.add(20);
    listTwo.add(21);
    listTwo.add(85);
    listTwo.add(92);

```

```
List<Integer> mergedList = mergeLists(listOne, listTwo);  
System.out.println("Merged List: " + mergedList);  
}  
}
```



The screenshot shows a console window from a Java IDE. The title bar contains standard window controls and icons. The console output is as follows:

```
Common elements:  
21 53  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```