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);
    }
}
```