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Write a dsa program to merge two single linked list

```
class Node {
    int data;
    Node next;


    Node(int data) {
     this.data = data;
     this.next = null;
    }
}


class LinkedList {
    Node head;


    public void insert(int data) {
        Node newNode = new Node(data);
        if (head == null) {
            head = newNode;
```

```java
        } else {
            Node temp = head;
            while (temp.next != null) {
                temp = temp.next;
            }
            temp.next = newNode;
        }
    }


    public Node mergeLists(Node l1, Node l2) {
        if (l1 == null) return l2;
        if (l2 == null) return l1;


        Node dummy = new Node(0);
        Node current = dummy;


        while (l1 != null && l2 != null) {
            if (l1.data <= l2.data) {
                current.next = l1;
                l1 = l1.next;
            } else {
                current.next = l2;
                l2 = l2.next;
            }
            current = current.next;
```

```java
        }



        if (l1 != null) {

            current.next = l1;

        } else if (l2 != null) {

            current.next = l2;

        }



        return dummy.next;     }



    public void printList(Node head) {

    Node temp = head;

    while (temp != null) {

        System.out.print(temp.data + " ");

        temp = temp.next;

    }

    System.out.println();

    }

}


public class Main {

    public static void main(String[] args) {

        LinkedList list1 = new LinkedList();

        LinkedList list2 = new LinkedList();
```

```java
        list1.insert(1);

        list1.insert(3);

        list1.insert(5);


            list2.insert(2);

        list2.insert(4);

        list2.insert(6);


        LinkedList mergedList = new LinkedList();

        mergedList.head = mergedList.mergeLists(list1.head, list2.head);


        System.out.println("Merged List:");

        mergedList.printList(mergedList.head);

    }

}
```

Output:

```
C:\>cd C:\Users\NAVYA SRI\Desktop\23BCE9703

C:\Users\NAVYA SRI\Desktop\23BCE9703>set path = "C:\Program Files\Java\jdk-22\bin"

C:\Users\NAVYA SRI\Desktop\23BCE9703>javac Main.java

C:\Users\NAVYA SRI\Desktop\23BCE9703>java Main
Merged List:
1 2 3 4 5 6
```