

❖ Merge Linked List:

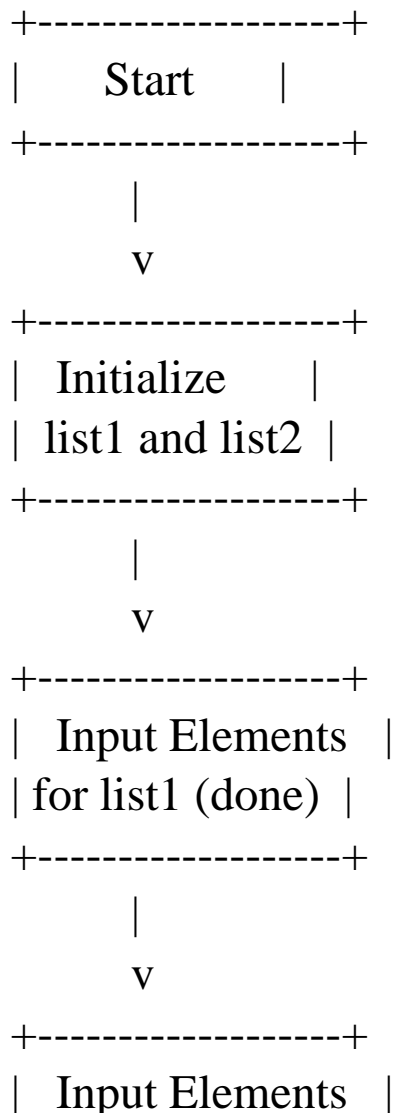
- Explanation:

The program merges two sorted linked lists by comparing their nodes and linking them together in sorted order. It takes user input to populate the two lists and then uses a dummy node to facilitate the merging process. Finally, it prints the resulting merged sorted linked list.

- Time Complexity and Space Complexity:

- $O(m+n)$ $O(1)$

- Flowchart:



```

| for list2 (done) |
+-----+
|
| v
+-----+
| Initialize      |
| dummy Node     |
+-----+
|
| v
+-----+
| Pointers p1,   |
| p2 for list1 and list2 |
+-----+
|
| v
+-----+
| While p1 and p2 |
| are not null    |
+-----+
|
| v
+-----+
| Compare p1.data |
| and p2.data     |
+-----+
|
+-----+
|           |           |           |
p1 <= p2   p1 > p2       |
|           |           |           |

```

