**[Merge Two Sorted Lists](https://leetcode.com/problems/merge-two-sorted-lists/)**

**class Solution {**

**public ListNode mergeTwoLists(ListNode l1, ListNode l2) {**

**if(l1 == null && l2 == null) {**

**return null;**

**}**

**if(l1 == null) {**

**return l2;**

**}**

**if(l2 == null) {**

**return l1;**

**}**

**ListNode dummy = new ListNode(0);**

**ListNode current = dummy;**

**while(l1 != null && l2 != null) {**

**if(l1.val < l2.val) {**

**current.next = l1;**

**l1 = l1.next;**

**}**

**else {**

**current.next = l2;**

**l2 = l2.next;**

**}**

**current = current.next;**

**}**

**if(l1 != null) {**

**current.next = l1;**

**}**

**if(l2 != null) {**

**current.next = l2;**

**}**

**return dummy.next;**

**}**

**}**

Time Complexity : O(Min(l1,l2)) , l1 and l2 is no of nodes in l1 and l2 respectively

Space Complexity : O(l1+l2), , l1 and l2 is no of nodes in l1 and l2 respectively