

# Merge Sorted Lists

**Question:** Merge two sorted linked lists and return it as a new list. The new list should be made by splicing together the nodes of the first two lists.

**Solutions:**

```
class ListNode:
```

```
    def __init__(self, x):
```

```
        self.val = x
```

```
        self.next = None
```

```
class Solution:
```

```
    # @param two ListNodes
```

```
    # @return a ListNode
```

```
    def mergeTwoLists(self, l1, l2):
```

```
        dummy = ListNode(0)
```

```
        pointer = dummy
```

```
        while l1 != None and l2 != None:
```

```
            if l1.val < l2.val:
```

```
                pointer.next = l1
```

```
                l1 = l1.next
```

```
            else:
```

```
                pointer.next = l2
```

```
                l2 = l2.next
```

```
            pointer = pointer.next
```

```
        if l1 == None:
```

```
            pointer.next = l2
```

```
        else:
```

```
            pointer.next = l1
```

```
return dummy.next
```

```
def printll(self, node):
```

```
    while node:
```

```
        print ( node.val )
```

```
        node = node.next
```

```
if __name__ == '__main__':
```

```
    ll1, ll1.next, ll1.next.next = ListNode(2), ListNode(3), ListNode(5)
```

```
    ll2, ll2.next, ll2.next.next = ListNode(4), ListNode(7), ListNode(15)
```

```
    Solution().printll( Solution().mergeTwoLists(ll1,ll2) )
```