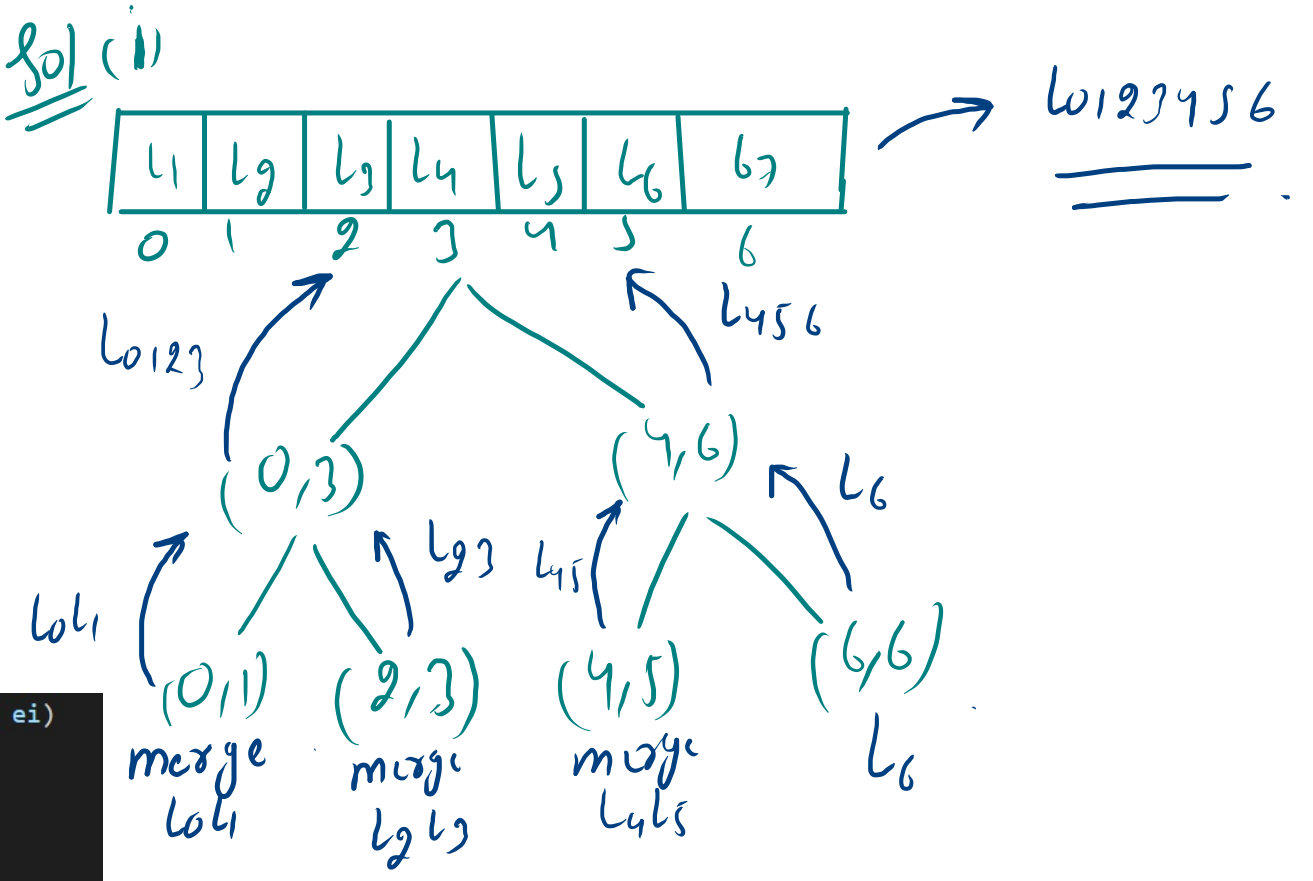
23. Merge k Sorted Lists

Hard 3975 258 Add to List Share

Merge *k* sorted linked lists and return it as one sorted list. Analyze and describe its complexity.

Example:

```
Input:
[
  1->4->5,
  1->3->4,
  2->6
]
Output: 1->1->2->3->4->4->5->6
```




```cpp
ListNode *mergeKLists_(vector<ListNode *> &lists, int si, int ei)
{
    if (si == ei)
        return lists[si];
    else if (si + 1 == ei)
        return mergeTwoLinkedList(lists[si], lists[ei]);

    int mid = (si + ei) >> 1;
    ListNode * left=mergeKLists_(lists,si,mid);
    ListNode * right=mergeKLists_(lists,mid+1,ei);

    return mergeTwoLinkedList(left,right);
}
```