# Merge K Sorted Lists

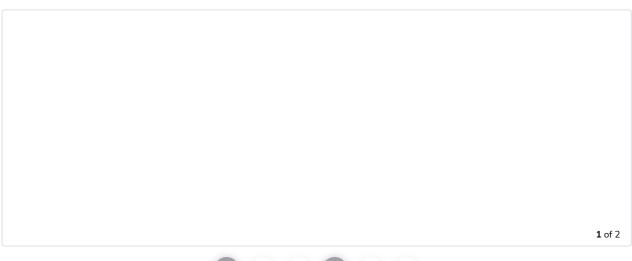Try to solve the Merge K Sorted Lists problem.

## Statement

Given an array of $k$ sorted linked lists, your task is to merge them into a single sorted list.

**Constraints:**

- $k =$ `lists.length`
- $0 \leq k \leq 10^3$
- $0 \leq$ `lists[i].length` $\leq 500$
- $-10^3 \leq$ `lists[i][j]` $\leq 10^3$
- Each `lists[i]` is sorted in ascending order.
- The sum of all `lists[i].length` will not exceed $10^3$.

## Example

## Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Merge K Sorted Lists

**1**

What is the output if the following string is given as input?

[[1, 2, 3], [12, 56, 200], [-10, -2, 5]]

A) [1, 2, 3, 12, 56, 200, -10, -2, 5]

B) [1, 2, 3, -10, -2, 5, 12, 56, 200]

C) [-10, -2, 1, 2, 3, 5, 12, 56, 200]

D) [-10, -2, 5, 1, 2, 3, 12, 56, 200]

Submit Answer

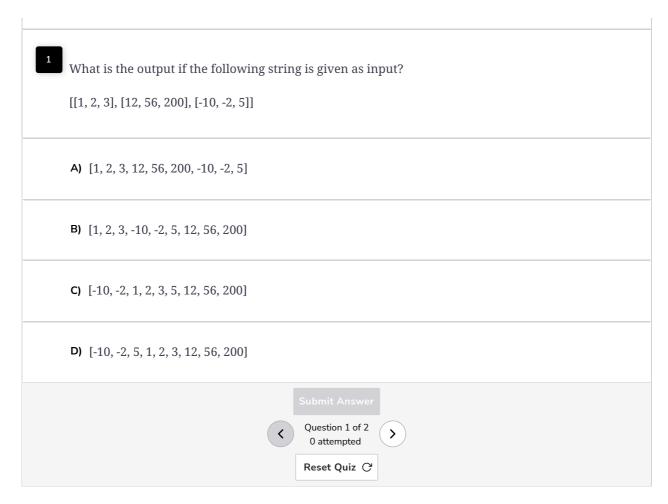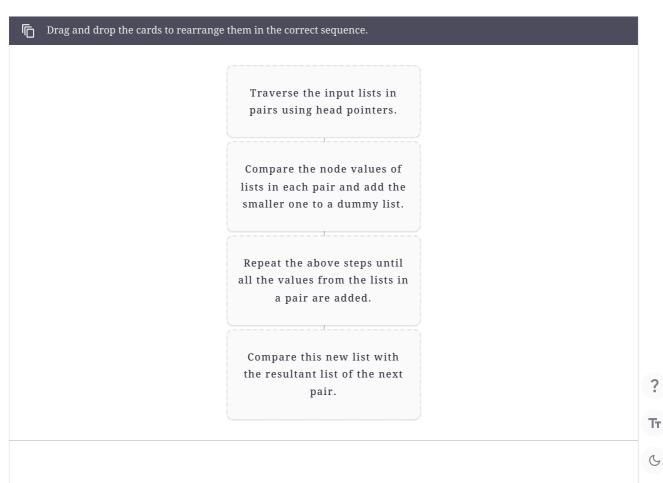< Question 1 of 2
0 attempted >

Reset Quiz ↻

## Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.

Drag and drop the cards to rearrange them in the correct sequence.

Traverse the input lists in pairs using head pointers.

Compare the node values of lists in each pair and add the smaller one to a dummy list.

Repeat the above steps until all the values from the lists in a pair are added.

Compare this new list with the resultant list of the next pair.

## Try it yourself

useful code templates in the other files, that you may build on to solve this problem.

| | Java | |
|---|---|---|

**MergeSortList.java**

LinkedListNode.java

LinkedList.java

LinkedListTraversal.java

LinkedListReversal.java

```java
import java.util.*;

class MergeSortList {

    public static LinkedListNode mergeKLists(List<LinkedList> lists) {

        // Your code will replace this placeholder return statement
        return null;
    }
}
```

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**Test Cases**    Results

Case 1    Case 2    Case 3

Input #1

[[21,23,42],[1,2,4]]

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