Merge K Sorted List.

1 → 4 → 5
1 → 3 → 4
2 → 6

Brute Force:
stich: 1→4→5→1→3→4→2→6
sort: 1→1→2→3→4→4→5→6
TC: Bad. O(N lg N)

Other Brute Force:
Use merge 2 sorted lists.

TC. O(N lg K)

L1
L2 → sorted L1L2
L3
L4 → sorted L1234
⋮
... sorted L 1 2 ....
n elements

But too much work.

log K

Heuristic: K ⇒ Priority Queue

1. → 4 → 5
1 → 3 → 4
2 → 6

PQ: 1. 1 2
Result: 1

1 → 4 → 5
1 → 3 → 4
2 → 6

PQ: 1 2 4
Result: 1 → 1

1 → 4 → 5
1 → 3 → 4
2 → 6

PQ: 2 4 3
Result: 1 → 1 → 2

Min Heap because we want minimum at each point.

Total N elements:

O(N lg K)