Flattening a Linked List

Medium Accuracy: 33.91% Submissions: 61679 Points: 4

Given a Linked List of size N, where every node represents a sub-linked-list and contains two pointers:
(i) a **next** pointer to the next node,
(ii) a **bottom** pointer to a linked list where this node is head.
Each of the sub-linked-list is in sorted order.
Flatten the Link List such that all the nodes appear in a single level while maintaining the sorted order.
Note: The flattened list will be printed using the bottom pointer instead of next pointer.

Example 1:

```
Input:
5 -> 10 -> 19 -> 28
|     |     |     |
7     20    22   35
|           |     |
8           50    40
|                 |
30               45
Output:  5-> 7-> 8- > 10 -> 19-> 20->
22-> 28-> 30-> 35-> 40-> 45-> 50.
Explanation:
The resultant linked lists has every
node in a single level.
(Note: | represents the bottom pointer.)
```

Example 2:

```
Input:
5 -> 10 -> 19 -> 28
|          |
7          22
|          |
8          50
|
30
Output: 5->7->8->10->19->20->22->30->50
Explanation:
The resultant linked lists has every
node in a single level.

(Note: | represents the bottom pointer.)
```

Your Task:
You do not need to read input or print anything. Complete the function **flatten()** that takes the **head** of the linked list as input parameter and returns the head of flattened link list.

Expected Time Complexity: O(N*M)
Expected Auxiliary Space: O(1)

Constraints:
0 <= N <= 50
1 <= $\mathbf{M_i}$ <= 20
1 <= Element of linked list <= 10^3

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