

Brac University (Department of Computer Science and Engineering)

CSE220: Data Structure

Lab Midterm Examination (CO3)

Summer 2023

Section: 8

Time: 30 Min

[Total Marks: 05]

You are given two sorted singly non-dummy headed linked lists. Your task is to write a function **sorted_merge(head1, head2)** that takes the heads of the two linked lists and returns the head of a new linked list with all the elements of the two lists in sorted order.

If there are repeated elements in the lists print only one.

Bonus : If any of the list contains repeated elements, they should appear only once in the new list

Input	Output
List1: 10 → 9 → 5 → 2 → None List2: 8 → 1 → None	10 → 9 → 8 → 5 → 2 → 1 → None
List1: 5 → 3 → 2 → -4 → None List2: -4 → -6 → None	5 → 3 → 2 → -4 → -6 → None
List1: 4 → 2 → -2 → -4 → None List2: 8 → 6 → 5 → -3 → None	8 → 6 → 5 → 4 → 2 → -2 → -3 → -4 → None
Bonus List1: 4 → 4 → 4 → 4 → None List2: 3 → 3 → 3 → None	4 → 3 → None
Bonus List1: 4 → 4 → 4 → 4 → None List2: 4 → 4 → 4 → None	4 → None

1. Write the method **create_list(array), insert_into_list_end(head, val)** [2]
2. Write method **sorted_merge(head1, head2)** [3]

Colab file : [CSE220_Sec8_LabMid](#)