

Assignment 4

a) Remove alternate nodes from a given linked list.

Input:

20 -> 18 -> 15 -> 10 -> 8 -> 6 -> 5 -> 3 -> NULL

Output:

20 -> 15 -> 8 -> 5 -> NULL

b) Reverse a linked list in groups of given size.

Input:

k=4

1->2->3->4->5->6->7->8->12->7->NULL

Output:

4->3->2->1->8->7->6->5->7->12->NULL

c) Delete duplicate elements from a given linked list. Retain the earliest entries.

Input:

20->18->15->20->6->18->5->3->NULL

Output:

20->18->15->6->5->3->NULL

d) Perform pair-wise swapping of nodes of a given linked list.

Input:

20 -> 18 -> 15 -> 10 -> 8 -> 6 -> 5 -> 3 -> 7 -> NULL

Output:

18 -> 20 -> 10 -> 15 -> 6 -> 8 -> 3 -> 5 -> 7 -> NULL

e) Delete the smallest number in the doubly linked list.

f) Find the smallest number in the doubly linked list.

g) Take N numbers as input from the user and create a doubly linked list.

h) Reverse a doubly linked list.

i) Make a function that adds a linked list to itself at the end.

Input:

4 -> 2 -> 1 -> NULL

Output:

4 -> 2 -> 1 -> 4 -> 2 -> 1 -> NULL