

Data Structures

- 1) Write a Singly linked list programs for
 - i) insert the nodes at begin.
 - ii) insert the nodes at end.
- 2) Write a Singly linked list program to sort the nodes. (add_middle prog).
- 3) Write a program to merge two Singly linked list.
- 4) Write a program to swap 'k'th node from beginning and 'k' node from end in a Singly linked list. For Ex: if nodes are
A --- B --- C --- D --- E --- F --- G --- H --- I
if k = 2 , then o/p should be
A --- H --- C --- D --- E --- F --- G --- B --- I
- 5) Write a Singly linked list program to swap the adjacent nodes.
For Ex: if nodes are
A --- B --- C --- D --- E --- F --- G --- H --- I
then o/p should be
B --- A --- D --- C --- F --- E --- H --- G --- I
- 6) Write a Singly linked list program to delete a particular according to any signature of a given structure.
- 7) Write a Singly linked list program to delete a particular node from last and also find the count of no. of nodes using only single traverse.
Ex: Suppose if there are 7 nodes, and if 2nd node has to be delete from last, then it is 6th node from starting.
Before delete : A --- B --- C --- D --- E --- F --- G
After delete : A --- B --- C --- D --- E --- G
- 8) Write a program to delete the duplicate nodes from sorted Singly linked list.
- 9) Write a program to delete the duplicate nodes from unsorted Singly linked list.
- 10) Write a program to reverse the data of given Singly linked list.
- 11) Write a program to reverse the data of only first 'M' no. of nodes of 'N' no. of nodes.
Input the 'M' value during runtime.
- 12) Write a program to reverse the links of first 'N' no. of nodes of a given Singly linked list.
Before reverse : A --- B --- C --- D --- E --- F --- G --- H
If M = 5, After reverse : E --- D --- C --- B --- A --- F --- G --- H
- 13) Write a program to reverse all links of given Singly linked list
 - i) using loops
 - ii) using recursion.
- 14) Write a Singly linked list program to check the given linked list is palindrome or not.
- 15) Write a Singly linked list program to implement Stack and Queue operations.
- 16) Write the Double linked list programs for the all above question.
- 17) Write a program to delete a node in a Circular Linked List.
- 18) Write a program to construct Binary-tree by the given nodes and print it in the order
 - i) pre-order
 - ii) in-order
 - iii) post-order
- 19) Write a program to search a node in a given Binary-tree.
- 20) Write a program to delete a particular node in a given Binary-tree according to any signature of a given structure.

----- END -----