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MAN106 Data structures

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Practical -5: Linked List

1. Define STACKLL to be a stack of characters as a linked list with Push, Pop and emptyStack operations. Write main to invert the string. Check whether a given string is a palindrome?
2. Write class QueueLL to implement queue as a linked list of characters. Include the following functions :
 - no argument constructor
 - isEmpty() //To check if the queue is empty
 - add() and remove() //To add and remove single information in queue
 - destructorTest the class in main.
3. Write a Class linkedList for implementing singly Linked list. Include the following:
 - a. A default constructor which constructs an empty list.
 - b. functions to perform insertion
 - i. in the beginning of the list.
 - ii. at the end of the list
 - iii. on the right of given node with address p
 - c. A function which displays the items in the list and returns the count of the number of nodes.
 - d. Test the class in main
 - e. a destructor
4. Write a Class linkedListCircular for implementing singly Linked circular list. Include the functions as in Q 3. Test the class.
5. Write a Class OrderedLinkedList of integers in ascending order. Include the functions as in Q 1. Test the class