

Programme	:	B.Tech	Semester	:	Fall 20-21
Course	:	Data structures and Algorithms (Embedded Lab)	Code	:	CSE2003
Faculty	:	Dr.B. Saleena / Dr.V.M.Nisha	Slot	:	L43+L44

Exercise -4 (04/8/2020)

Single linked list

- Upload a single WORD/ PDF document in the Moodle with all the programs, screenshots of input, and output for each program.
- **The Upload File must be named in this convention only Regno_Name (Example, 19BCE1001_Rahul) – Strictly to be followed.**

1. Implement Stacks **or** Queues using linked list.
2. Devise a program to create a list of integers dynamically .Write functions
 - (i) To count the number of nodes in a Singly Linked List
 - (ii) Find the maximum and minimum from the list.
 - (iii) To delete an element from the list.
 - (iii) Display the contents of the list.

Additional Practice Problems

1. Create two linked list , Let the first linked list be 1->3->5 and second linked list be 2->4->6->8, Write a program to merge the two lists and return a third list as 1->3->5 ->2->4->6->8.
2. Given two lists sorted in increasing order, create and return a new list representing the intersection of the two lists. The new list should be made with its own memory. The original lists should not be changed. 1->2->3->4->6 and second linked list be 2->4->6->8, then your function should create and return a third list as 2->4->6.
3. Given a linked list of characters, write a C function that returns true if the given list is a palindrome, else false. RADAR , MALAYALAM

