Government Polytechnic, Ahmedabad

Computer Department

Sem III
Data Structures (3330704)

Unit IV: Linked List

Sr. No.	Question
1	Explain pointer data type. Explain how a pointer variable is declared and initialized in C with example.
2	Define linked list. List various operations that can be performed on a linked list.
3	Explain different types of linked list with its graphical representation.
4	Define singly linked list. Write and explain an algorithm to insert a node at the beginning of the list.
5	Write and explain algorithm to insert element at the end of singly linked list.
6	Write an algorithm to delete last node from the singly linked list.
7	Differentiate between linked list and sequential list.
8	Write a function to create singly linked list and explain it.
9	Write an algorithm to search a given node in a singly linked list.
10	Write an algorithm to count number of nodes in a singly Linked List.
11	Write an algorithm to INSERT a node in sorted Singly Linked List.
12	Write a program to perform following operations for singly Linked List: 1) Insert new node at first 2) Insert new node at end
13	Define doubly linked list. Write and explain algorithm to insert a node at the end of the doubly linked list.
14	What is an ordered Linked List? Write an algorithm to insert new node into an ordered Linked List.
15	Differentiate between singly linked list and doubly linked list. List advantage of doubly linked list over singly linked list.
16	Write an algorithm to insert a new node before first node in doubly linked list.
17	Write an algorithm to DELETE first and last node from Doubly Linked List.
18	Write applications of linked list