**KRISHNA ENGINEERING COLLEGE** 

(Approved by AICTE & Affiliated to Dr. APJ Abdul Kalam Technical University (Formerly UPTU), Lucknow) **Department of**

**Computer Science and Engineering (Artificial Intelligence) Data Structure using C Lab (KCS351)**

**Exercise-4: Write C Programs to illustrate the concept of Linked List**

**List of Experiments**

1. Write a menu driven program in C for **a singly linked list** with the following operations (Array implementation and pointer implementation):

*a. insertion of the node at the starting of linked list*

*b. insertion of the node at the end of linked list*

*c. insertion of a node after a given node in the linked list*

*d. deletion of the first node from the linked list*

*e. deletion of the last node from the linked list*

*f. deletion of a given node from the linked list*

*g. display*

*h. exit*

2. Write a menu driven program in C for **a doubly linked list** with the following operations: *a. insertion of the node at the starting of linked list*

*b. insertion of the node at the end of linked list*

*c. insertion of a node after a given node in the linked list*

*d. deletion of the first node from the linked list*

*e. deletion of the last node from the linked list*

*f. deletion of a given node from the linked list*

*g. display*

*h. exit*

3. Write a menu driven program in C for **a circular header linked list** with the following operations: *a. insertion of the node at the starting*

*b. insertion of the node at the end*

*c. insertion of a node after a given node*

*d. deletion of the first node*

*e. deletion of the last node*

*f. deletion of a given node*

*g. display*

*h. exit*

4. Write a C program for addition, subtraction multiplication of 2, single variable polynomials using linked list.

5. Write a C program for addition, subtraction and multiplication of 2, two variables polynomials using linked list