

**5-Year Integrated M.Sc. (computer Science)**

**Gujarat University**

**Semester -4**

**Data Structures**

**Practical assignment-1**

**Due Date :- 20'th Feb 2024**

1. Write a program to perform following operations on a circular singly linked list

1. Insert an element at the beginning, middle ,end
2. Delete an element from the beginning, middle,end
3. Reverse the list
4. Search an element
5. Sort the list
6. Insert data in sorted order
7. Update a given element
8. From a given list delete data in sorted order.

2. Write a program to perform following operations on a circular doubly linked list

1. Insert an element at the beginning, middle ,end
2. Delete an element from the beginning, middle, end
3. Reverse the list
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3. Write a program to perform following operations on a circular doubly linked list

1. Insert an element at the beginning, middle ,end
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4. Write a program which input two polynomials of single variable. Adds them and displays the result polynomial.

5. Write a program which input one polynomial of two variables.

1. Multiply the entire polynomial with a constant.
2. Add two polynomials
3. Subtract two polynomials

6. Write a program to merge two sorted arrays.

7. write a program to represent sparse matrix.