Data Structures Lab Cycle II

1. Implement a singly linked list and its operations such as create a linked list, insert a node at various positions and delete a node at various positions.
2. Implement stack, queue, circular queue and their operations using linked list with a menu driven program.

3. Implement Polynomial addition and multiplication using linkedlist.

4. Implement swapping of nodes in a linked list without swapping data.

5. Implement reversing a linked list in groups of given size.

6. Implement circular linkedlist and its operations insert, delete, traverse etc.

7. Write a menu driven program to implement student record(student name, roll no and total marks) o a class using linked list. The menu should have the following operations
   (i) Create a student record
   (ii) Search for a student record [use roll no as key]
   (iii) Insert a new student record
   (iv) Delete a particular student record
   (v) Display all student records

8. Write a menu driven program to implement a **Music Playlist Manager** for a media player using a circular linked list in C. The system should simulate the functionality of a playlist where songs can be added, removed, and played in a loop.

9. Implement a doubly linked list and its operations such as insert, delete and traverse .

10. Write a menu driven program which will maintain a list of car models, their price, name of the manufacturer, engine capacity, etc., as a doubly linked list. The menu should make provisions for inserting information pertaining to new car models, delete obsolete models, update data such as price, in addition to answering queries such as listing all car models within a price range specified by the client and listing all details, given a car model.