**Data Structures**

1. Implement Quick Sort.
2. Implement Merge Sort
3. Implement Heap sort by constructing max or min heap.
4. Implement a Singly Linked List with following options
   1. Insertion of a node at any location.
   2. Deletion of a node from any location.
   3. Search a value in list.
   4. Display the list.
   5. Display in reverse.
   6. Reverse the list without using additional data structure.
5. Implement polynomial using CLL and perform
   1. Addition of Polynomials
   2. Multiplication of polynomials
   3. Evaluation of polynomial.
6. Implement stack as an abstract data type using linked list
7. Implement binary search tree as an ADT
8. Implement a binary inorder threaded tree and traverse it.
9. Implement BTree.
10. Create a graph using adjacency list / adjacency matrix implement BFS and DFS traversals.
11. Create a graph using adjacency list / adjacency matrix find minimum spanning tree using Prim’s algorithm.
12. Represent a given graph using adjacency matrix/adjacency list and find the shortest path using Dijkstra's algorithm.
13. Implementation of Hash table using array and handle collisions using Linear probing, chaining without replacement.
14. Implement Tic-Tac- Toe game.