Lab Exercise-4(Part-1)

Lab exercise (C/C++):

1. Implement a **Binary Search Tree (BST)** using linked data structure and perform Insertion, Deletion, Search operations and report the number of comparisons made for each operation.

2. Implement a Priority Queue using a **BST** that supports the following operations:

2.1 Insert an element into the priority queue with a given priority.
2.2 Delete the highest-priority element (smallest value in BST).
2.3 Search for an element and report the number of comparisons made.
2.4 Display all elements in increasing order of priority (use in-order traversal).

Constraints:

- The BST should store elements in (priority, value) format.
- The smallest priority value has the highest priority (Min-Priority Queue).
- Each operation should maintain BST properties for efficient access.

3. Implement the Pre-order, In-order, and Post-order tree traversal algorithms for:

3.1 Binary tree
3.2 Binary search tree