**Advanced Programming Lab**

**LAB 4 Binary Tree**

1. What is the time complexity for Insert, Delete and Print?

- **Insertion**: To insert number it will take **O(ceil(log n))** time, where n is the number which is inserting.
- **Deletion**: To delete number it will take **O(ceil(log n))** time, where n is the number which is deleting.
- **Print**: To print the numbers in sorted order, first it will make array of numbers present in the tree in O(n) time then sort the array using merge sort in O(nlogn). So time complexity will be **O(nlogn)** where n is number of nodes in tree.

2. What is the space complexity used in your implementation?

- **Space complexity: O(n)** to store the numbers present in the tree where n is number of nodes in the tree.