Lab No-6:

Transform-and-Conquer-II

L6. 1) Write a program to find diameter of a binary tree. The diameter of a binary tree is the longest path between any two nodes.

L6. 2) Write a program to find the total number of nodes in a binary tree and analyze its efficiency. Obtain the experimental result of order of growth and plot the result.

L6. 3) Write a program for finding and deleting an element of a given value in a Heap.

L6. 4) Write a program to sort the list of integers using heap sort with bottom-up max heap construction and analyze its time efficiency. Prove that the worst-case time complexity is O (n log n).