Sardar Vallabhbhai National Institute of Technology, Surat
Department of Artificial Intelligence
Data Structure (AI102)
B.Tech I - II Semester
<u>Assignment-12</u>

1. Write a C or C++ program to sort the input array [12, 45, 33, 87, 56, 9, 11, 7, 67] using the Bucket Sort algorithm with 7 buckets.

2. Write a C/C++ program that ask the user to enter 10 integer values. Use these values to construct a binary tree with 10 nodes. After constructing the tree, perform and display the inorder, preorder, and postorder traversals.

3. Given the inorder and preorder traversals of a binary tree, write a C/C++ program to construct the binary tree.

   Inorder: 1, 8, 19, 13, 25, 9, 5, 10, 4, 3

   Preorder: 25, 8, 1, 13, 19, 5, 9, 4, 10, 3