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| **EWULogo.png** | **EAST WEST UNIVERSITY** |
| **Department of Computer Science and Engineering** |
| **B.Sc. in Computer Science and Engineering Program** |
| **Lab Examination, Spring 2022 Semester** |
| **Course:** | **CSE 207- Data Structures, Section-1** |
| **Instructor:** | **Dr. Maheen Islam, Associate Professor, CSE Department** |
| **Full Marks:** | **30 Marks** |
| **Time:** | **1 Hour 20 Minutes** |

**Problem-1:**

# Write a program that will construct a BST, find the longest root-to-leaf path and delete the leaf node on that path. First, your program will take inputs from the user and construct the BST, Second, it will print the tree elements using inorder traversal. Next, it will print the longest root-to-leaf path. Finally, it will delete the leaf node on the longest root-to-leaf path and print the tree using inorder traversal.

# Note that if there are multiple answers print any one of them.

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| |  |  | | --- | --- | | Sample input | Sample Output | | 50    / \  20 70    / \ \  10 45 80  \  48 | Inorder traversal  10 20 45 48 50 70 80  Longest Root-to-leaf paths  50, 20, 45, 48  Inorder traversal after deletion  10 20 45 50 70 80 | |  |