

# **National University**



Of Computer & Emerging Sciences Faisalabad-Chiniot Campus

## CL-2001 Data Structures Lab # 10

#### **Objectives:**

- Binary Search Tree BST
- Insertion in BST
- Deletion in BST
- Searching in BST
- Traversal (in-order, post-order, pre-order)

#### Note: Carefully read the following instructions (*Each instruction contains a weightage*)

- 1. There must be a block of comments at start of every question's code by students; the block should contain brief description about functionality of code.
- 2. Comment on every function and about its functionality.
- 3. Mention comments where necessary such as comments with variables, loop, classes etc to increase code understandability.
- 4. Use understandable name of variables.
- 5. Proper indentation of code is essential.
- 6. Write a code in C++ language.
- 7. Make a Microsoft Word file and paste all of your C++ code with all possible screenshots of every task **outputs in Microsoft Word and submit word file.**
- 8. First think about statement problems and then write/draw your logic on copy.
- 9. After copy pencil work, code the problem statement on MS Studio C++ compiler.
- 10. At the end when you done your tasks, attached C++ created files in MS word file and make your submission on Google Classroom. (Make sure your submission is completed).
- 11. Please submit your file in this format 19F1234\_L8.
- 12. Do not submit your assignment after deadline. Late and email submission is not accepted.
- 13. Do not copy code from any source otherwise you will be penalized with negative marks.
- 14. Submit .cpp files of all tasks



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## Problem: 1 |

Write a function to delete a specific node in BST.

### Problem: 2 |

Write a Function to find the number of nodes at a specific height (given by user).

#### Problem: 3 |

Write a C++ code to find the largest and smallest values in BST.

#### Problem: 4 |

Implement pre-order and post-order traversals using iterative method

### Problem: 5 |

Write a function to determine whether the Binary Tree is BST or not.



Best of luck