**Data Structures & Algorithms LAB**

(BSCS-F18 Morning & Afternoon)

**Lab # 10**

**Task # 1**

Implement following class of binary tree

|  |  |
| --- | --- |
| **class TreeNode**  **{**  **friend class BinaryTree;**  **private:**  **int data;**  **TreeNode\* left;**  **TreeNode\* right;**  **};** | **class BinaryTree**  **{**  **private:**  **TreeNode \* root;**  **};** |

1. Implement **constructor** of BinaryTree
2. Implement **destructor** of BinaryTree

**Task # 2**

Implement **Insert** function of **BinaryTree** which insert at the first available position (Level order)

Hint: you may done it using queue

Instruction: Construct your own queue class for manipulating TreeNode

**Task # 3**

1. Display Binary Tree nodes using pre-order traversal
2. Display Binary Tree nodes using post-order traversal
3. Display Binary Tree nodes using In-order travel