**S.Y. B. Tech. Academic Year 2018-19 Trimester: VI**

CS231

**Data Structure-II**

**LABORATORY WRITE UP**

###### Experiment Number: 02

### **TITLE: Binary tree and its Traversal**

**PROBLEM STATEMENT**:

Implement binary tree using C++ and perform following operations: Creation of binary tree and traversal (recursive and non- recursive)

**OBJECTIVE:**

1. To study data structure : Tree & Binary Tree
2. To study different traversals in Binary Tree
3. To study recursive and non-recursive approach of programming

**THEORY: *//To be Written by Students***

***// Write theory by elaborating below points***

Write in brief about

* Tree
* Different definitions related to binary tree.
* Different Traversals (Inorder, Preorder and Postorder)

**IMPLEMENTATION:**

* **PLATFORM:** 
  + 64-bit Open source Linux or its derivatives.
  + Open Source C++ Programming tool like g++/Eclipse Editor.
* **TEST CONDITIONS:-**

1. Input at least 10 nodes.
2. Display all traversals of binary tree with 10 nodes.(recursive and nonrecursive)

* **PSEUDO CODE: *//To be Written by Students***

Write pseudo code for create, inorder, preorder, postorder (non-recursive)

* **TIME COMPLEXITY: *//To be Written by Students***

Find out time complexity of above operations

* **CONCLUSION:**

Thus, implemented different operations on CLL.

* **FAQs *//To be Written by Students***

1. Explain any one application of binary tree with suitable example.

2. Explain sequential representation of binary tree with example.

3. Write inorder, preorder and postorder for following tree.

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40 50 100 40

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* **PRACTICE ASSIGNMENTS**

###### Write a program to find the depth of binary tree.

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