**Lab Tasks**

**Lab Exercise:**

### Lab Task 1:

Suppose the following values are inserted into a binary search tree, in the order given:

12, 7, 9, 10, 22, 24, 30, 18, 3, 14, 20

* 1. Draw a diagram of the resulting binary tree.
  2. How would the values in the tree you sketched for part a be displayed in an in-order traversal?
  3. How would the values in the tree you sketched for part a be displayed in a preorder traversal?
  4. How would the values in the tree you sketched for part a be displayed in a post order traversal?

### Lab Task 2:

A company wants to store his Employees data but orderly. Because of that owner wants to use a binary search tree. Each Node must store the employee number, name, and salary double (class).

Implement in java/C++ a binary search tree that stores the employees and implements the following methods:

a) Include a new Employee (insert values)

b) Search an employee given its number.

c) Delete an employee.

d) Get in-order, pre-order, post-order traversal of tree and display values.

**Evaluation criteria**

The evaluation criteria for this lab will be based on the completion of the following tasks. Each task is assigned the marks percentage which will be evaluated by the instructor in the lab whether the student has finished the complete/partial task(s).

Table: Evaluation of the Lab

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | **Task No** | **Description** | **Marks** |
| 1 | Task 1 | Lab Task 1 | 10 |
| 2 | Task 2 | Lab Task 2 | 10 |

**Further Reading**

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