S.Y. B. Tech. Academic Year 2022-23 Semester: IV

Advanced Data Structures

LABORATORY WRITE UP

Experiment Number: 03

TITLE: Implementation of Dictionary using Binary Search Tree

PROBLEM STATEMENT:

Implement dictionary using binary search tree where dictionary stores keywords & its meanings. Perform following operations:

i. Insert a keyword
ii. Delete a keyword
iii. Create mirror image and display level wise
iv. Copy

OBJECTIVE:

1. To study data structure : Binary Search Tree
2. To study breadth first traversal.
3. To study different operations on Binary search Tree.

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

// Write theory by elaborating below points

Write in brief about

- Binary Search Tree
- Breadth First Traversal
- Different operations on binary search tree.(copy ,mirror image and delete)

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 binary search tree levelwise traversals of binary search tree with 10 nodes
3. Display mirror image and copy operations on BST

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

  Write pseudo code for create, display, delete, mirror image and copy

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

  Find out time complexity of above operations

- **CONCLUSION:**

  Thus, implemented Dictionary using Binary search tree.

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

  1.Explain application of BST
  2.Explain with example deletion of a node having two child.
  3.Define skewed binary tree.

- **PRACTICE ASSIGNMENTS**

  1. Write a program to check equality of binary search tree.

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