PUNE INSTITUTE OF COMPUTER TECHNOLOGY

INFORMATION TECHNOLOGY

ACADEMIC YEAR -2020_21

SUB: DSA 2019 course Semester – I

DSFL ASSIGMENT NO 6 WRITUP OUTLINE

1	**Title**	Assignment 6: Threaded Binary tree
2.	**Aim**	To implement a threaded Binary Tree
3.	**Problem statement**	Implement In-order Threaded Binary Tree. Traverse the implemented tree in Pre-order and In order Traversal.
4.	**Objective**	
5.	**Outcome**	
6.	**Theory**	C. Theory :: 1. Limitations or problem with normal binary 1. TBT concept, definition with example 2. Graphical Representations 3. Types of TBT 4. Advantages of TBT over Normal binary tree
7.	**Algorithms /Pseudocode:**	Write down the pseudocode for the following operations and explain each of them with appropriate examples and data structure (tree can be (inorder Threaded Expression tree / binary tree/binary search tree) i. TBT creation using in order threading ii. TBT Non recursive preorder and inorder traversal
8.	**Test cases/validation**	1. Valid input data with respect to the tree your are constructing (inorder Threaded Expression tree / binary tree/binary search tree) 2. Test case : Use test for appropriate tree.
09	**Program**	Printout /Softcopy
10.	**Results /output**	Including test cases , validations and valid inputs based results .
11.	**Conclusion**	Analysis with respect to time and space complexity, comparison with normal binary tree

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