

Assignment 5: Data Structures Div A Batch B3

Sr. No	Problem statement	Roll Nos	
1	Write a Program to create a Binary Tree and perform following nonrecursive operations on it. a. Preorder Traversal b. Postorder Traversal c. Count total no. of nodes d. Display height of a tree.	2	65
2	Write a Program to create a Binary Tree and perform following nonrecursive operations on it. a. Levelwise display b. Mirror image c. Display height of a tree.	8	67
3	Write a program to illustrate operations on a BST holding numeric keys. The menu must include: • Insert • Delete • Find • Show	55	12
4	Write a program to illustrate operations on a BST holding numeric keys. The menu must include: • Insert • Mirror Image • Find • Post order (nonrecursive)	58	7
5	Write a Program to create a Binary Tree and perform following Nonrecursive operations on it. a. Inorder Traversal b. Preorder Traversal c. Display Number of Leaf Nodes d. Mirror Image	59	38
6	Write a Program to create a Binary Tree and perform following Nonrecursive operations on it. a. Inorder Traversal b. Preorder Traversal c. Display Height of a tree d. Find Maximum	61	48
7	You have to maintain information for a shop owner. For each of the products sold in his/hers shop the following information is kept: a unique code, a name, a price, amount in stock, date received, expiration date. For keeping track of its stock, the clerk would use a computer program based on a search tree data structure. Write a program to help this person, by implementing the following operations: • Insert an item with all its associated data. • Find an item by its code, and support updating of the item found. • List valid items in lexicographic order of their names.	68	45
8	Write a Program to create a Binary Search Tree and perform following nonrecursive operations on it. a. Preorder Traversal b. Inorder Traversal c. Display Number of Leaf Nodes d. Mirror Image	69	49
9	Write a Program to create a Binary Search Tree and perform following nonrecursive operations on it. a. Inorder Traversal b. Postorder Traversal c. Display Height of a tree d. Count total no. of nodes	70	
10	Write a Program to create a Binary Search Tree and perform following nonrecursive operations on it. a. Preorder Traversal b. Postorder Traversal c. Display total Number of Nodes d. Display Leaf nodes.	72	

11	Write a Program to create a Binary Search Tree and perform deletion of a node from it. Also display the tree in nonrecursive postorder way.	62	
12	Write a Program to create a Binary Search Tree and display it levelwise. Also perform deletion of a node from it.	51	
13	Write a Program to create a Binary Search Tree and display its mirror image with and without disturbing the original tree. Also display height of a tree using nonrecursion.	15	
14	You have to maintain information for a shop owner. For each of the products sold in his/hers shop the following information is kept: a unique code, a name, a price, amount in stock, date received, expiration date. For keeping track of its stock, the clerk would use a computer program based on a search tree data structure. Write a program to help this person, by implementing the following operations: • Insert an item with all its associated data. • List expired items in Prefix order of their names. • List all items. • Delete an item given by its code. • Delete all expired items.	66	
15	Write a program, using trees, to assign the roll nos. to the students of your class as per their previous years result. i.e topper will be roll no. 1.	63	
16	Write a program to efficiently search a particular employee record by using Tree data structure. Also sort the data on emp-id in ascending order.	64	