

Computer Science and Engineering Department

List of Advanced Data Structure Lab Assignments

Assignment No.	Assignment Title	Programming Language
1	Accept prefix expressions, and construct a binary tree and perform recursive and non-recursive traversals.	C++
2	A Dictionary stores keywords & its meanings. Provide facility for adding new keywords, deleting keywords, updating values of any entry. Provide a facility to display whole data sorted in ascending/ Descending order. Also, find how many maximum comparisons may require for finding any keyword. Use Binary Search Tree for implementation.	C++
3	Create a Binary Search tree and find its mirror image. Print original & new tree level wise. Find height & print leaf nodes.	C++
4	Create an in-order threaded binary search tree and perform the traversals.	C++
5	Represent a given graph using an adjacency list and perform DFS or BFS.	C++
6	Represent a given graph using an adjacency list or array and find the shortest path using Dijkstra's algorithm.	C++
7	Represent a given graph using an adjacency list or array and generate a minimum spanning tree using Kruskal's or Prim's algorithm.	Python
8	Create a hash table and handle the collisions using linear probing with or without replacement.	Python
9	Implementation of simple index file.	C++
10	Company maintains employee information such as employee ID, name, designation and salary. Allow users to add, delete information about employees. Display information of a particular employee. If an employee does not exist, an appropriate message is displayed. If it is, then the system displays the employee details. Use a sequential file to maintain the data.	Python
11	A Dictionary stores keywords & its meanings. Provide facility for adding new keywords, deleting keywords, updating values of any entry. Provide a facility to display whole data sorted in ascending/ Descending order. Also, find how many maximum comparisons may require for finding any keyword. Use Height balanced tree and find the complexity for finding a keyword.	Python
12	Implement Heap sort.	C++