CSE215:DATA STRUCTURES AND ALGORITHMS LABORATORY

L:0 T:0 P:2 Credits:1

Course Outcomes: Through this course students should be able to

CO1 :: Code the standard algorithms for manipulating data organized in different structures

CO2 :: Implement the problem solution with the use of basic data structures such as Arrays, Linked List, Stacks, Queues, Trees and Graphs

CO3 :: Classify the efficient implementation of linear and non linear data structures

List of Practicals / Experiments:

Basics

- Array of structures and pointers
- Pointers and records

Arrays

- Dynamic creation of arrays
- Linear Search and Binary Search
- Bubble sort
- Insertion
- Deletion

Searching and Sorting techniques

- Implementation of all searching and sorting techniques

Linked Lists

- Two-way lists
- Traversal
- Insertion
- Deletion
- Header linked list
- Circular linked list

Stacks and Queues

- Tower of Hanoi
- Insertion
- Deletion
- Traversal

Trees

- BST insertion
- BST creation
- Heap insertion
- Heap deletion
- Heap sort

Text Books:

1. DATA STRUCTURES USING C by REEMA THAREJA, OXFORD UNIVERSITY PRESS

References:

1. DATA STRUCTURES,ALGORITHMS AND APPLICATIONS IN C++ by SARTAJ SAHNI, UNIVERSITIES PRESS PVT. LTD