



CS 231

DATA STRUCTURES LAB USING C++

Course Objectives:

- Write programs that implement linear data structures such as stacks, queues and lists and their applications.
- Write programs that implement of different non linear data structures such as trees and graphs.
- Write programs to implement algorithms for searching using hash tables and binary search trees.
- Write programs to implement sorting algorithms such as selection, shell, merge, quick and heap sorts.

List of Experiments:

- 1.Implementation of Stacks, Queues.
- 2.Infix to Postfix Conversion, evaluation of postfix expression.
- 3.Polynomial arithmetic using linked list.
- 4.Implementation of Binary Search and Hashing.
- 5.Implementation of Selection, Shell, Merge and Quick sorts.
- 6.Implementation of Tree Traversals on Binary Trees.
- 7.Implementation of Heap Sort.
- 8.Implementation of operations on AVL Trees.
- 9.Implementation of Traversal on Graphs.
- 10.Implementation of Splay Trees.

Note: For each of the problems PSP (Personal Software Process) Principles should be applied.