

# Data Structures

---

1. Pointers & Structures-
    - a. Review of pointers
    - b. Review Of Structures
    - c. Typedefs & ADTs
  2. Arrays
    - a. Multidimensional arrays
    - b. Arrays and pointer association
    - c. Polynomial representation
  3. Linked Lists
    - a. Single, double and circular lists
    - b. Insertion,deletion,traversal
    - c. Polynomial representation
  4. Linear Sorting
    - a. Bubble,Insertion,Selection sort
    - b. Sorting with arrays and linked lists
  5. Non Linear Sorting
    - a. Recursion Concepts
    - b. Quick,heap sorts
  6. Searching
    - a. Binary search
    - b. Fibonacci
    - c. Index sequential search
  7. Stacks
    - a. Implementations with arrays and Linked list
    - b. Applications of stacks
  8. Queues
    - a. implementations
    - b. application
  9. Trees
    - a. Concept & Implementation
    - b. Binary tree
    - c. Traversal
    - d. Insertion, deletion of leaf nodes
    - e. Threaded binary tree
    - f. Applications of trees
- Lab Sessions:
    - Each Topic is covered with practical (lab) sessions along with classroom sessions
    - Solutions of the assignments are explained and shown practically
    - Students will undergo thorough exercises and debugging sessions

