Lesson Plan

Session 2022-23, Odd Semester

Name of Professor: Manisha Saini

Class:BCOM CAV -3rd Sem

Subject code and Name: BC(Voc-305) Data Structures

Month	Topics covered
01/09/2022 To 26/09/2022	Data Structure: linear and least structures: array definition, type, address calculation, stack: push/pop algorithms, applications
27/09/2022 To 21/10/2022	Queue: INS/DEL algorithm, double and circular queue concept only.
27/10/2022 To 21/11/2022	List: single linked list, algorithm and double linked list and circular linked list concepts; B-Tree concepts
22/11/2022 To 24/12/2022	Files: serial, sequential, indexed, direct, multi-list

Lesson Plan

Session 2022-23, Odd Semester

Name of Professor: Manisha Saini

Class: BCA-3rd sem

Subject code and Name: BCA-232 Data Structures

Month	Topics covered
01/09/2022 To 26/09/2022	**UNIT - I** Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures, Algorithms complexity and time-space tradeoff, Big-O notation. Strings: Introduction, String strings, String operations, Pattern matching algorithms.
27/09/2022 To 21/10/2022	**UNIT - II** Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparce matrics. Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithms for Insertion, deletion in array, Single linked list
27/10/2022 To 21/11/2022	**UNIT - III** Stack: Introduction, Array and Linked representation of stacks, Operations on stacks, Applications of stacks: Polish notation, Recursion. Queues: Introduction, Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of and queues.
22/11/2022 To 24/12/2022	**UNIT - IV** Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees, Traversal algorithms using stacks and using recursion. Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs.