



Event	: One day Seminar
Topic	: Implementation Of Data Structure Using C Language
Resource Person	: Ms. Garima Saini
Schedule	: 10.30 am onwards
Date	: 25 th October 2019
Day	: Friday
Venue	: BCA Department PG Building 4 th Floor Room No:-1410
Faculty In charge	: Dr. Vishal Khatri, HOD(BCA, MCA Department)
No of Students	: 45

Objectives:

To learn about:-

1. Data structure.
2. Various types of Data structure
3. Implementation of Data Structure Using C Language
4. Performance analysis and Space complexity, Time complexity
5. Best case, Average case, Worst case



Ms. Garima Saini Career Bandhu, Delhi, Addressing The Students



Certificates Distribution



Students Attending The Workshop

Report Of Seminar Implementation Of Data Structure Using C LanguageOn :

Tecnia Institute of Advanced Studies organized a Seminar on 25th October 2019 at BCA Deptt (PG Block, 4th Floor Room No:-1410), by Corporate Trainer Ms.Garima Saini, Career Bandhu (Delhi) for BCA 1st and MCA 3rd & 5thSem. The seminar divided into module and sub modules are:

SEMINAR CONTENT OF IMPLEMENTATION OF DATA STRUCTURE USING C LANGUAGE

1) Introduction to Data Structure

- Data, algorithm
- Performance analysis
- Space complexity
- Time complexity
- Best case, average case, best case
- Linear and non linear data structures

2) Tree

- Binary Tree properties, types & traversals
- BST (operations on BST)
- AVL Tree

3) Graph

- Graph Terminologies and Types
- Graph Representations
- Graph Traversals
- Spanning Tree and Minimum Cost Spanning Tree (MCST)

Data Structure

Data Structures in C are used to store data in an organised and efficient manner. The C Programming language has many data structures like an array, stack, queue, linked list, tree, etc. A programmer selects an appropriate data structure and uses it according to their convenience

Importance of Data Structure?

Data Structure is process through which we can collect and organize data in best way as well as perform operation on that in most effective way. If we have good understanding of data structures then we are specialized in organizing and storing data. Data structure is designed to organized data to suit a specific purpose so we can access and perform operation with in appropriate ways.

Types of Data Structure?

There are mainly two types of data structure:

- a.) Primitive Data Structures.
- b.) Abstract Data Structure

Primitive Data Structures: Primitive data types like integer,float, boolean & char etc. Concept to handling these types of data types in efficient way known as Primitive Data Structures.

Abstract Data Structure: We have also complex type of data types like linked list, tree, graph, stack & queue etc. Concept to handling complex, connected and large amount of data in an appropriate way known as Abstract Data Structure.

There are two types of Abstract Data Structures:

- **Stacks:** It is a simple data structure that allows adding and removing elements in a particular order. Every time an element is added, it goes on the top of the stack, the only element that can be removed is the element that was at the top of the stack, just like a pile of objects.
- **Queue:** Queue is also an abstract data type or a linear data structure, in which the first element is inserted from one end called REAR(also called tail), and the deletion of existing element takes place from the other end called as FRONT(also called head). This makes queue as FIFO data structure, which means that element inserted first will also be removed first. The process to add an element into queue is called Enqueue and the process of removal of an element from queue is called Dequeue.

Learning Outcomes:

The students have learnt:-

1. Data structure.
2. Various types of Data structure
3. Implementation of Data Structure Using C Language
4. Performance analysis and Space complexity, Time complexity
5. Best case, Average case, Worst case