

## C Programming

Duration – 1 Month

### ➔ INTRODUCTION TO C

- History of C
- Features of C
- Importance of C
- About Procedural Language

### ➔ INTRODUCTION TO

- Role of Compiler
- Role of Interpreter
- Compiling & Linking

### ➔ AN OVERVIEW OF C AND BUZZWORDS

- Data Type, Variable
- Operators
- Control Statement
- Preprocessor Directives

### INPUT AND OUTPUT OPERATORS

- Reading/Writing Characters
- Formatted input/output Function

### ➔ DECISION MAKING AND LOOPING

- The IF...ELSE Statement
- Nesting of IF...ELSE Statements
- The Switch Statement
- The While Statement
- The DO and FOR Statement

### ➔ ARRAYS AND STRING

- One/Two/Multi Dimensional Arrays
- Dynamic Arrays
- Reading String from Terminal
- Writing String to Screen
- String Handling Functions
- Table of String

### ➔ FUNCTION

- Defining Function
- Benefit of Function
- Nesting of Functions
- Recursion
- Variable Storage Classes
- Variable arguments Function

## ➤ POINTERS

- Understanding Pointers
- Pointer Expressions
- Pointer and Arrays
- Pointers and Character String
- Pointers to Functions
- Pointers and Structures

## ➤ STRUCTURES AND UNIONS

- Defining a Structure
- Benefit of Structure
- Size of Structure
- Arrays of Structures
- Structures and Functions
- Defining Unions

## ➤ DYNAMIC MEMORY ALLOCATION

- Introduction to Dynamic Memory Allocation
- malloc, calloc, realloc, free
- Concepts of Linked Lists
- Creating a Linked Lists
- Inserting/Deleting an item
- Application of Linked Lists

## ➤ FILE MANAGEMENT IN C

- Introduction to File Management
- Opening/Closing a File
- Input/Output operations on Files
- Error Handling During I/O Operations
- Command Line Arguments