C Programming Language

Detailed Explanation

Corporate Training with Certification

- ✧ Detailed Explanation with real time Examples
- ✧ Live video Recording of every class
- ✧ Topic wise Exercises
- ✧ Assignments & Tasks
- ✧ Interview questions /Projects

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✧ INTRODUCTION

- What is Programming Language
- What is C-programming
- Why should we learn C first
- C programming Advantages and Applications
- History of C programming Language
- How C -works Internally
- Executing C First programming using IDE.

✧ C PROGRAMMING BASICS

- Difference between Interpreter Vs Compiler
- Types of Editors for C
- Download & Installation of C programming Software's.
- Syntax of C-Programming with example
- Basic Rules of C programming
- How to Compile and Execute hello world Program
- Overview of IDE and Shortcuts.

✧ INPUT /OUTPUT ,SYNTAX

- Printf(), Sanf() Functions
- Comments and its Necessary
- Tokens & Identifiers
- Reserved words in C
- Whitespaces using in C
- Format Specifies using in C
- Variables Declaring and Initializing

✧ DATA TYPES

✧ Primary Data types:

- Integer Types (int)
- Floating Point Types (float)
- Character Type (char)

✧ Derived Data Types:

- Array
- Pointer
- Structure
- Union

✧ No Data Type :

- Void Data Types

✧ OPERATORS

- Arithmetic operators
- Relational operators
- Logical operators
- Assignment operators
- Bitwise Operators
- Increment/Decrement Operators
- Conditional Operators
- Special Operator

✧ CONDITIONAL STATEMENT

- If Statement
- If…else Statement
- if else…ladder Statement
- Nested if statement
- Switch Statement
- Nested Switch statement

✧ LOOPING STATEMENT

- While loop
- For loop
- do… while loop
- Difference between while vs do..while
- Nested loops
- Pattern Programs

✧ Loop Control Statements

- Break
- Continue
- goto

✧ FUNCTIONS

- What is function and its Importance
- Defining a function
- Function Declarations
- Calling function
- Call by Value
- Call by Reference

Types of functions:

- Function without Retruntype without Arguments
- Function without Retruntype with Arguments
- Function with Retruntype without Arguments
- Function with Retruntype with Arguments

- Function with default Arguments
- Recursion Function
- Local variables
- Global Variables
- Local Variables Vs Global Variables

✧ ARRAYS

- Declaring Arrays
- Initializing Arrays
- Accessing Array Elements

✧ Arrays in Detail:

- Multidimensional Arrays
- Two Dimensional Arrays
- Initializing Two Dimensional Array
- Accessing Two Dimensional Array Elements

- Passing Arrays to Functions
- Pointer to an Array

✧ POINTERS

- What is Pointer
- How to use Pointers
- Null Pointers

✧ Pointers in Detail:

- Pointer Arithmetic
- Incrementing/Decrementing a pointer
- Pointer comparisons
- Pointer to Pointer
- Pointer to Array
- Pointer to Function
- Pointer to Structure

✧ STRING FUNCTIONS

◆ String inbuilt functions Detail:

- strlen(), strcpy(), strcat()
- Strcmp(), strrev(), strupr()
- strlwr(), strcmpi(), ..etc
- Count number of vowels and consonants in a string

✧ MATH FUNCTONS

✧ Math inbuilt functions Detail:

- sin(), cos(), tan()
- sqrt(),pow(), exp(), log(),
- ceil(), floor(), round(), ..etc

✧ STRUCTURES

- Defining a Structure
- Accessing Structure Members
- User Input in Structure
- Array to Structure
- Pointer to Structure

✧ Bit Fields

- Defining Bit fields
- Usage of Bit fields

✧ UNIONS

- Defining a Union
- Accessing Union Members
- Difference Between Structure Vs Union

✧ ENUMERATION, TYPEDEF

- Defining enum
- Accessing enum Members
- Defining a Typedef
- Accessing Typedef Members
- Difference between typedef vs #define

✧ FILE HANDLING

✧ Input and Output:

- The Standard Files
- The getchar() and putchar() functions
- The gets() and puts() Functions
- The Scanf and printf() Functions

✧ FILE I/O:

- Opening a File
- Closing a File
- Writing Data to the File
- Reading Data from the File

✧ TYPE CASTING,PREPROCESSORS, ✧ HEADERFILES

✧ Type Casting:

- What is Type Casting and It's importance
- Implicit Type Casting with Examples
- Explicit Type Casting with Examples

✧ Preprocessors:

- Important Preprocessor Directives
- Predefined macros & with Example
- Preprocessor Operators
- Parameterized Macros with Example

✧ Header files:

- Importance of Header files
- Types of Header files
- How to include Header files

✧ MEMORY MANAGEMENT

- Dynamic Memory Allocation importance
- malloc(), calloc(), realloc(), free Functions
- Allocating Memory Dynamically
- Resizing and Releasing Memory