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## C Language

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### COURSE DETAILS

- History and Features of C
- Importance of C
- About Procedural Language
- Role of Compiler
- Role of Interpreter
- The Structure of a C Program
- Writing C Programs
- Building an Executable Version of a C program
- Debugging a C Program
- Examining and Running a C Application Program

### An Overview of C And Buzzwords

- Data Type , Variable
- Operators
- Control Statement
- Preprocessor Directive Input and Output Operators
- Reading/Writing Characters
- Formatted Input/Output Function

### Control Statement

- The IF ..... ELSE Statement

- IF..... ELSE ladder
- Nesting of IF.....ELSE Statements
- The Switching Statements
- The Do-While Statements
- FOR Statements

## Array in C

- Array : What and why ?
- One Dimensional Arrays
- Two Dimensional Arrays
- Multi Dimensions Arrays
- Dynamic Arrays

## String Handling

- Reading String from Terminal
- Writing String to Screen
- String Handling Function
- Table of String

## Function in C

- Function Basics
- Advantage of Function
- Recursion
- Variable Storage Classes
- Variable arguments Function

## Pointers in C

- Understanding Pointers
- Pointer expressions
- Pointer and Arrays
- Pointer and Characters String
- Pointer to Functions
- Pointer and Structures

## Structures and Unions

- Defining a Structure
- Advantage of Structure
- Size of Structure
- Array of Structure
- Structures and Functions
- Defining Unions

## Dynamic Memory allocation

- Introduction to Dynamic Memory Allocation
- Malloc
- Calloc
- Realloc
- Free

## Linked List

- 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

## Preprocessor

- Macro Substitution
- File Inclusion
- Computer Control Directives



