

# C Programming

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**Duration: 6 Weeks(Weekdays/Weekend Batches)**

**Prerequisites**

- There are no pre-requisites for this course.

**Course Contents**

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**1. Introduction to C**

- Features of C
- Applications of C
- Programming Language Classification

**2. Keywords, Constants and Variables**

- Tokens in C
- Variables
- Constants

**3. Data Types in C**

- Primary Data Types
- Secondary Data Types
- Types of Instruction in C

**4. Operator and Expressions**

- Arithmetic & Relational Operator
- Logical Operator
- Increment and Decrement Operator
- Assignment Operator
- Size of Operator
- Type Conversion

**5. Control Structure**

- Conditional Control Structure
- Iterative Control Structures
- Jumping Control Structures
- Multiway Control Structures

**6. Storage Classes**

- Automatic Storage Class
- Static Storage Class
- External Storage Class
- Register Storage Class

**7. Functions**

- Defining a Function
- Working of a Function
- Types of Function
- Recursive Function

**8. Pointers**

- Use of Pointer
- Declaration of Pointer
- Call by Reference
- Operation on Pointers
- Dereferencing of Pointer
- Pointer to Pointer
- Pointer to Function

**9. Arrays**

- Classification of Arrays
- One-Dimensional Arrays
- Multi-dimensional Arrays
- Arrays and Functions
- Array of Pointers
- Limitations of an Array
- Applications of an Array

**10. Structure**

- Defining Structure
- Declaring Structure Variable
- Initializing Structure Variable
- Accessing Structure Elements
- Nested Structure
- Array of Structures
- Pointers to Structures
- Passing Structure to Function
- Union

**11. String Handling**

- Declaration of String
- Initialization of String
- Reading String from Terminal
- Reading Line of Text
- Writing String to Screen
- String Handling Functions
- Other String Functions

**12. Preprocessor Directives**

- Introduction to Pre-processor
- Working of Pre-Processor
- Types of Pre-processor Directives

**13. File Management in C**

- Introduction to File
- Types of File
- Basic Operation on File

**14. Dynamic Memory Allocation**

- Dynamic Memory Allocation Functions
  - Dynamic Data Structures
  - Classification of Data Structure
  - Introduction to Linked List
  - Advantages & Drawbacks of Linked List
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