

C LANGUAGE

Introduction to C Language

- History of C
- Features of C
- Importance of C
- About Procedural Language
- Role of Compiler
- Role of Interpreter
- Compiling and Linking

An Overview of C and Buzzwords

- Data Type, Variables, Keywords, Constants
- Preprocessor Directives
- Input / Output operations using printf and scanf
- Operators and Programs
- Control Statement

Decision Making and Looping

- The If...Else Statement
- Nesting of If...Else Statements
- The Switch Statement
- The While Statement
- The Do and For Statement
- Nested Loops

Arrays and String

- One/Two/Multi Dimensional Arrays
- Dynamic Arrays
- String Handling Functions

FUNCTIONS

- Defining Functions
- Benefit of Functions / Types of Functions
- Nesting of Functions
- Recursive Functions
- Local vs. Global Variable
- Variable Storage Classes

Structures and Unions

- Defining of a Structure
- Benefit of Structure
- Size of Structure
- Arrays of Structure

- Structure with in a Structure
- Structures and Functions
- Defining Unions

Dynamic Memory Allocation

- Introduction to dynamic memory allocation
- Malloc, calloc, realloc, free

GRAPHICS PROGRAMMING

C++ LANGUAGE

Classes and Objects

- Why C++
- Understanding OOPS principles
- Understanding Classes and objects
- Defining Member Functions
- Arrays within a class
- Memory allocation for Objects
- Friend Function and Friend class
- Static data members
- Static member functions

Constructors and Destructors

- Defining Constructors
- Multiple Constructors in a class
- Parameterized/Copy/Dynamic Constructors
- Destructors

Operator Overloading

- Overloading Unary/Binary Operators
- Rules for Overloading Operators

Inheritance: Extending Classes

- Defining Derived Classes
- Constructors in Derived Classes
- Single/Multiple//Multilevel/Hierarchical/Hybrid Inheritance
- Virtual Base Classes
- Abstract Classes

Pointers and Polymorphism

- Understanding Pointers
- Pointer Expressions
- Pointer to Variable/Array/Function/Object
- this Pointer
- Compile Time / Run time polymorphism

File Management in C++

- Introduction to File Management
- Reading the Data from the File

- Writing the Data into the File
- Reading and Writing the Objects in File

Exception Handling

- Basics of Exception Handling
- Exception Handling/Throwing/ Catching Mechanism

Template

- Introduction to Template
- Class Template
- Function Template

Namespaces

Command Line Arguments

Macros

Enumerated Data Types

Mouse Handling

C/C++ ON LINUX

PROJECT WORK

WEEKLY TESTS

**INTERVIEW/OBJECTIVE
QUESTIONS**

DAILY ASSIGNMENTS