

'C++' LANGUAGE COURSE (CODING SYLLABUS)

Course Overview

'C++' is a general-purpose programming language that was developed as an enhancement of the 'C' language to include object-oriented paradigm. It is an imperative and a **compiled** language.

Duration: 1 Month

Job Prospects

Language used by every developer. Scroll over to this article and get all the acquired information about C++ programming language.

Job Profiles

- Junior Programmer
- Senior Programmer
- Software Developer
- Quality Analyst.
- Game Programmer.
- Programming Architect

Course Content

Introduction to 'C++'

- History of 'C++'.
- 'C++' language Environment

Language Features

- About Polymorphism, Encapsulation, Abstraction, Inheritance
- Difference and Similarities between C and C++
- Variables Declaration
- Function overloading
- Optional Parameters
- Reference Variables
- Operator overloading
- Basics of Console Input and Output
- Constant Pointers
- Dynamic Memory Allocation
- Role of Compilers and Assemblers

Introduction to C++ Buzzwords

Flow Control Statements

OOPs Concepts

- Overview of OOPs Principles
 - Oops vs. Procedural Programming Approach
 - Oops Implementation & Approaches
- Introduction to classes & objects
- Creation & destruction of objects
- Data Members
- Member Functions
- This Pointer
- Constructor & Destructor
- Static class member
- Friend class and functions

Contact: 92155-33058, 98127-33058, 90345-02220

Encapsulation

Polymorphism

- What is Polymorphism
- Pure virtual functions
- Virtual Base Class
- Nesting of Class (i.e. Outer Class, Inner Class, Local Class) Polymorphism
- Function Overloading
- Constructor & Destructor
- Operator Overloading
- Function Overriding

Inheritance

- Introduction and benefits
- Access Specifier.
- Base and Derived class Constructors
- Types of Inheritance.
 - Single Inheritance
 - Multiple Inheritance
 - Multilevel Inheritance
 - Hierarchical inheritance
 - Hybrid Inheritance
- Down casting and up casting.
- Function Overriding
- Need of Virtual Function
 - Virtual Function
 - Pure Virtual Function
- Destructor overriding
- Binding Types
 - Static Binding
 - Dynamic Binding
- Abstraction
 - Data Abstraction
 - Abstract Class
- Pointers in C++
- Inline Functions
- Friend function and friend class

Operator Overloading

- Binary Operator Overload
- Unary Operator Overload

I/O Streams

- C++ Class Hierarchy
- File Stream
- Text File Handling
- Binary File Handling
- Error handling during file operations

Exception Handling

- Introduction to Exception.
- Benefits of Exception handling.
- Try and catch block.
- Throw statement.
- Pre-defined exceptions in C++.
- Writing custom Exception class

Templates

- Introduction
- Function Templates
- Class Templates

