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Bridging Gap Between Developed & Developing India !

# Techno Comp Academy

An IT Training Institute

Branch : New Sangvi, Pune.

Contact : 9284293870

## Course Content – C++ Programming

### Introduction to C++

Overview and History of C++

What is Programming

What is mean by Procedure oriented Programming language

What is mean by Object Oriented Programming language

C++ is object oriented Why??

About C

About C++

Installation and setup of C++ development environment

Installation of Sublime

Installation of VS Code

Installation of G++

Writing First program using IDE

Basic structure of a C++ program

First C++ program

Understanding your first C++ program

C++ is superset of C. Justify.

### Basics of C++ Language

Constants

Variables –

- Normal Variable
- Pointer Variable
- Reference variable
- Default Parameter

Keywords

Comments

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Data Types

Variable Declarations

Output instruction in C++

Input instruction in C++

Operators in C++

## Conditional statements in C++

if

if-else

else-if ladder

Nested if else

conditional operator

Switch case control

Menu driven programs

## Looping / Iterative Statement

While loop

For loop

do-while loop

foreach loop

Control Flow Statements –

- break
- continue
- goto



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## Functions in C++

Function Introduction

Function call, Function Prototype, Function Definition

Predefined/library Functions and user-defined functions

Recursion

Approach to recursive solution

Function overloading

## Array

Array Introduction

One dimensional Arrays

Multidimensional Arrays

## String in C++

C Style String

C++ Style String

Function on Strings

## Dynamic Memory Allocation

Introduction to Pointer

concept of memory address

referencing and dereferencing operators

'this' pointer

'new' & delete Operator for DMA.

SMA Vs DMA

DMA on normal variable, array and Objects



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## Object Oriented C++

Class and Object

Data abstraction

Encapsulation

Constructor and Destructor

'this' pointer

Scope resolution(:: ) operator

'static' keyword

- Static Data member
- Static Member function

Array of Object –

- Statically
- Dynamically

Friend Function and Friend Class

Overloading –

- Function Overloading
- Constructor Overloading
- Operator Overloading

Inline Functions

Inheritance

Overriding

Constructor and Destructor Calling Sequence in an Inheritance

Data Hiding

'public', 'protected', 'private' access specifiers

'virtual' keyword-

- Virtual function
- Virtual destructor
- Virtual class
- Pure Virtual Function

Abstract Class

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## Templates

Template Function

Template Class

STL Library

## File Handling

File Stream Classes

- ifstream class
- ofstream class
- fstream class

Reading from and writing to files

File Input-Output Operation

File Seeking operation

Programs on File Operation

Reading and writing image, video files.

## Miscellaneous topics

Input Output Formatting

Nested Classes

Namespaces



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## Course Completion Certificate

At the end of course you will get Techno Comp Academy's Course Completion Certificate.

## Duration

3 Months