C++ Training

Course Description:

This hands on C++ training course presents a thorough introduction to object-oriented programming in C++ for experienced C programmers. The central concepts of C++ syntax and style are taught in the context of using object-oriented methods to achieve reusability, adaptability and reliability. Emphasis is placed on the features of C++ that support abstract data types, inheritance, and polymorphism. Students will learn to apply the process of data abstraction and class design. Practical aspects of C++ programming including efficiency, performance, testing, and reliability considerations are stressed throughout. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

Course Prerequisites:

Prior programming experience with C.

Target Audience:

This course is specially designed for the B.Tech /B.E(CSE/IT/EEE/ECE/Mech) and all other IT related Graduates and Post Graduate students. Mission Professionalism has conquered the job scenario and companies seek for well qualified, professional and skilled manpower. Quality Education and Performance Oriented Training is our motto.

What Student/Professionals Will Learn?

- Using private, public and protected keywords to control access to class members
- Defining a class in C++
- Writing constructors and destructors
- Writing classes with const and static class members
- Overloading operators
- Implementing polymorphic methods in programs
- Writing programs using file I/O and string streams
- Using manipulators and stream flags to format output
- Using the keyword template to write generic functions and classes
- Writing programs that use generic classes and functions
- Writing programs that use algorithms and containers of the Standard Library
- Using algorithms and containers of the Standard Library to manipulate string data
- Using try() blocks to trap exceptions
- Using catch() blocks to handle exceptions
- Defining exceptions and using throw to trigger them
- Writing procedural programs using C++

COURSE-CONTENT

Module 1:- INTRODUCTION TO C++

- Understanding Requirements : Why C++
- C vs. C++
- Advantage of OOP
- Software and Hardware for C++
- Compiling and Linking

Module 2:-AN OVERVIEW OF C++ AND BUZZWORDS

- Data types ,variable
- Operators
- Control Statement

Module 3:-FUNCTION

- Defining function
- Call/Return by Reference
- Function Overloading
- Friend and Virtual Functions

Module 4:-CLASSES AND OBJECTS

- Defining Member Functions
- Arrays within a class
- Memory allocation for objects
- Pointers to members

Module 5:-CONSTRUCTORS AND DESTRUCTORS

- Parameterized/copy/dynamic Constructors
- Multiple constructor in a class
- Dynamic initialization of objects
- Constructing two-dimensional Arrays
- Destructors

Module 6:-OPERATOR OVERLOADING

- Overloading unary/binary operators
- Manipulation of string using operators
- Rules for overloading operators
- Type conversions

Module 7:-INHERITANCE: EXTENDING CLASSES

- Defining derived classes
- Constructors in derived classes

- Single/multiple/multilevel/hierarchal/hybrid inheritance
- Virtual base classes
- Abstract classes
- Member classes: nesting of classes

Module 8:-POINTERS, VIRTUAL FUNCTIONS AND POLYMOPHISM

- Pointers to objects
- This pointer
- Pointer to derived classes
- Virtual functions

Module 9:-MANAGING CONSOLE I/O OPERATIONS

- C++ stream classes
- Unformatted/formatted I/O operation

Module 10:-FILE MANAGEMENT IN C++

- Introduction to file management
- Opening /closing a file
- Input/output operation on files
- Error handling during I/O operations
- Command line arguments

Module 11:-EXCEPTION HANDLING

- Basics of exception handling
- Exception handling/throwing/catching mechanism
- Rethrowing an exception

Module 12:-TEMPLATE

- Introduction to template
- Class template
- Function template

INTEGER Innovation will provide:

- Training Slides taught during training by trainers
- Programmatic Examples
- Assignments of each topic in a module
- Demos executed during training session.
- Software’s and installation guide (for future help)
- E-books for further reading in depth
- Reference links
- 24X7 online support for any queries or doubts.