

C++ COURSE CONTENT

Duration: 30 Hours

Our Strength
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C++ Programming Syllabus

- ❖ **Introduction:**
What is object oriented programming ?, Why do we need object oriented ?
Programming characteristics of object oriented languages
- ❖ **C++ Programming basics:**
Output using cout. Directives., Input with cin., Type bool., The setw manipulator.
Type conversions.
- ❖ **Functions:**
Returning values from function., Reference arguments, Overloaded function.,
Inline function, Default arguments., Returning by reference.
- ❖ **Object and Classes:**
(Encapsulation, Abstraction, Polymorphism, Classes, Messages Association,
(Interfaces), Implementation of class in C++, C++ objects as physical object,
C++ objects as data types constructor, returning object as function arguments.
The default copy constructor, returning object from function., Structures and
classes. Const and classes.
- ❖ **Arrays and String Arrays fundamentals:**
Arrays as class Member Data, Arrays of object string., The standard C++ string
class
- ❖ **Operator overloading:**
Overloading unary operations, Overloading binary operators., Data conversion
Pitfalls of operators overloading and conversion keywords. Explicit and mutable.
- ❖ **Inheritance:**
Concept of inheritance, Derived class and based class, Derived class constructors,
member function, inheritance in class hierarchies, inheritance and graphics shapes
Public and private inheritance aggregation classes within classes, inheritance and
program development
- ❖ **Pointer:**
Addresses and pointers. The address of operator and pointer array, Pointer and
function pointer and C types string, Memory management, New and delete, Pointers
to objects, Debugging pointers
- ❖ **Virtual Function:**
Virtual Function , friend function, static function, assignment and copy
initialization this pointer dynamic type information
- ❖ **Streams and Files:**
Streams classes , stream Errors, Disk File I/) with streams, file pointers, error
handling in file I/O with member function overloading the extraction and insertion
operator s memory as a stream object command line arguments and printer
- ❖ **Templates and Exceptions:**
Function templates , Class templates Exceptions.

