

i-Nate Education

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Course Duration: 50 hrs

Principles of object oriented Programming:- Procedure oriented programming approach, Object-oriented Programming paradigm, Concepts of object oriented programming, Benefits of OOPs.

Introduction to C++: Introduction to C++, Applications of C++, A Simple C++ Program, Structure of C++ Program, Creating source file, Compiling and linking.

Tokens, Expressions and Control structures:- Tokens, Keywords, Identifiers and constants, Basic data types, User defined data types, Derived data types, Symbolic constants, Type compatibility, Declaration of variables, Dynamic Initialization of variables, Reference variables, Operator in C++, Scope resolution operator, Member dereferencing operators, Memory management operators, Manipulators, Type cast operator, Expressions and their types, Special assignment expressions, Implicit conversions, Operator overloading (overview), Operator procedure, Control structures.

Functions in C++:- main functions, Function prototyping, Call by reference, Return by reference, Inline factors, Default arguments, Const arguments, Function overloading, Friend and virtual functions.

Classes and objects:- C structure, Specifying a class, Defining member functions, C++ Program with class, Making an outside function Inline, Nesting of member functions, Private member functions, Arrays within a class, Memory allocation for objects, Static data members, Static member functions, Arrays of objects, Objects as function argument, Friend functions, Returning objects, Const member functions , Pointers to members,

Constructors and Destructors:- Constructors, Parameterized constructors, Multiple Constructors in a class, Constructors with Defaults arguments, Dynamic Initialization of objects, Copy Constructors, Dynamic Constructors, Constructing two-dimensional Arrays, Const objects, Destructors.

Operator overloading:- Defining Operator Overloading ,Overloading Unary and Binary Operators ,Overloading Binary Operators Using Friends, Rule for Overloading Operators.

Inheritance :- Introduction to Extending Classes , Defining Derived Classes, visibility of inherited members, Type of Inheritance (Single ,Multilevel ,Multipel ,Hierarchical ,Hybrid), Virtual base Classes Abstract Classes ,Constructors and Destructors in Derived Classes, Nesting of classes.

Pointers , Virtual Functions:- Pointers to objects, this pointer , Pointers to derived classes , Virtual Functions, Pure Virtual Functions.

Managing Console I/O Operations:- C++ Stream Classes, Unformatted and Formatted I/O Operations Managing output with Manipulators.

Working with Files :- Classes for File Stream Operations, Opening and Closing a File, File Modes File Pointers and Their Manipulations, Sequential Input and Output Operations, Updating a File Error Handling During File Operations, Command –Line Arguments.

Templates:- Class templates, Class templates with multiple parameters, Function templates, Function templates with multiple parameters, Overloading of templates functions, Member function templates, Nontype template argument.

Exception Handling:- Basics of Exception Handling, Exception handling Mechanism, Throwing Mechanism, Catching Mechanism, Re-throwing an Exception, Specifying Exception.