

Wave Techtronics

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Course Content: C++ Language

Introduction to C++:

- Evolution and features of C++.
- Object-oriented programming (OOP) concepts.

Basic Syntax and Data Types:

- Variables and Constants.
- Data types and modifiers.
- Input and Output streams.

Operators and Expressions:

- Arithmetic, relational, logical operators.
- Operator overloading.
- Type conversion.

Control Flow:

- Conditional statements: if, else-if, switch-case.
- Looping: for, while, do-while.
- Break and Continue statements.
- Exception handling: try, catch, throw.

Functions:

- Function overloading.
- Inline functions.
- Default arguments.
- Recursion in C++

Pointers

- Concepts of Pointers

Classes and Objects:

- Class declaration and definition.
- Access specifiers: public, private, protected.
- Constructors and destructors.
- Static members.

Inheritance:

- Types:
 - Single Inheritance
 - Multiple Inheritance
 - Multilevel Inheritance
 - Hierarchical inheritance
- How to perform inheritance

Polymorphism and Overloading:

- Function overloading.
- Operator overloading.
- Virtual functions and runtime polymorphism.

File Handling:

- File stream classes: ifstream, ofstream.
- Reading and writing to files.
- Exception handling in file operations.
- Binary Files
- Modes of Files
- Copying data from one file to other
- Renaming a file

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