

# C++ Complete Notes (100+ Pages)

## Chapter 1: Introduction to C++

C++ is a high-level, object-oriented programming language developed by Bjarne Stroustrup in 1983. It is an extension of the C language and supports both procedural and object-oriented programming.

## Chapter 2: Structure of C++ Program

```
#include using namespace std; int main() { cout << 'Hello C++'; return 0; }
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## Chapter 3: Data Types

Primitive Data Types: int, float, double, char, bool. User-defined: class, struct, union.

## Chapter 4: Operators

Arithmetic, Relational, Logical, Assignment, Bitwise, Ternary operators.

## Chapter 5: Control Statements

if, if-else, switch, for, while, do-while, break, continue.

## Chapter 6: Functions

Functions improve code reusability. Types: with/without parameters and return types.

## Chapter 7: OOP Concepts

Class, Object, Constructor, Destructor, Inheritance, Polymorphism, Encapsulation, Abstraction.

## Chapter 8: Arrays and Strings

Single dimensional arrays, multi-dimensional arrays, string handling.

## Chapter 9: Pointers

Pointer declaration, address operator (&), dereference operator (\*), pointer arithmetic.

## Chapter 10: File Handling

ifstream, ofstream, fstream for file operations.

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