

C++ supports **classes and inheritance**, which allow existing code to be reused by creating new classes from existing ones. C++ supports **classes and inheritance**, which allow existing code to be reused by creating new classes from existing ones. C++ is considered portable because **the same source code can be compiled and run on different platforms** (Windows, Linux, macOS) with minimal or no changes. C++ is an extension of the **C programming language**. **Object-Oriented Programming (OOP)** features like encapsulation, inheritance, and polymorphism.

High performance and efficiency, suitable for system-level programming. The main difference is that **C is a procedural programming language**, while **C++ is an object-oriented programming language**. C++ is suitable because it is **portable, platform-independent, and supported by compilers on multiple operating systems**, allowing applications to run on different platforms. **C** focuses on functions and follows a procedural approach.

- **C++** supports both procedural and object-oriented approaches using classes and objects.

C++ is considered object-oriented because it supports **classes, objects, encapsulation, inheritance, and polymorphism**, which help model real-world entities.

- A **C++ compiler** (e.g., GCC, Clang).
- A **text editor or IDE** (e.g., VS Code, Code::Blocks).

A compiler **translates C++ source code into machine code** and reports syntax errors, allowing the program to be executed by the computer.