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| **Comparison Index** | **C++** | **Java** |
| **Key Component** | C++ | JAVA |
| **Mainly used for** | C++ is mainly used for system programming. | Java is mainly used for application programming. It is widely used in window, web-based, enterprise and mobile applications. |
| **Design Goal** | C++ was designed for systems and applications programming. It was an extension of [C programming language](https://www.javatpoint.com/c-programming-language-tutorial). | Java was designed and created as an interpreter for printing systems but later extended as a support network computing. It was designed with a goal of being easy to use and accessible to a broader audience. |
| **Multiple inheritance** | C++ supports multiple inheritance. | Java doesn't support multiple inheritance through class. It can be achieved by [interfaces in java](https://www.javatpoint.com/interface-in-java). |
| **Operator Overloading** | C++ supports [operator overloading](https://www.javatpoint.com/cpp-overloading). | Java doesn't support operator overloading. |
| **Pointers** | C++ supports [pointers](https://www.javatpoint.com/cpp-pointers). You can write pointer program in C++. | Java supports pointer internally. However, you can't write the pointer program in java. It means java has restricted pointer support in java. |
| **Compiler and Interpreter** | C++ uses compiler only. C++ is compiled and run using the compiler which converts source code into machine code so, C++ is platform dependent. | Java uses compiler and interpreter both. Java source code is converted into bytecode at compilation time. The interpreter executes this bytecode at runtime and produces output. Java is interpreted that is why it is platform independent. |
| **Call by Value and Call by reference** | C++ supports both call by value and call by reference. | Java supports call by value only. There is no call by reference in java. |
| **Structure and Union** | C++ supports structures and unions. | Java doesn't support structures and unions. |
| **Documentation comment** | C++ doesn't support documentation comment. | Java supports documentation comment (/\*\* ... \*/) to create documentation for java source code. |
| **Object-oriented** | C++ is an object-oriented language. | Java is also an [object-oriented](https://www.javatpoint.com/java-oops-concepts) language. However, everything (except fundamental types) is an object in Java. |