

C++ (/ˌsiːˈplʌsˈplʌs/) is a high-level, general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or "C with Classes". The language has expanded significantly over time, and modern C++ has object-oriented, generic, and functional features in addition to facilities for low-level memory manipulation. It is almost always implemented as a compiled language, and many vendors provide C++ compilers, including the Free Software Foundation, LLVM, Microsoft, Intel, Oracle, and IBM, so it is available on many platforms.[6]

C++ was designed with a bias toward system programming and embedded, resource-constrained software and large systems, with performance, efficiency, and flexibility of use as its design highlights.[7] C++ has also been found useful in many other contexts, with key strengths being software infrastructure and resource-constrained applications,[7] including desktop applications, video games, servers (e.g. e-commerce, Web search, or SQL servers), and performance-critical applications (e.g. telephone switches or space probes).[8]

C++ is standardized by the International Organization for Standardization (ISO), with the latest standard version ratified and published by ISO in December 2017 as ISO/IEC 14882:2017 (informally known as C++17).[9] The C++ programming language was initially standardized in 1998 as ISO/IEC 14882:1998, which was then amended by the C++03, C++11 and C++14 standards. The current C++17 standard supersedes these with new features and an enlarged standard library. Before the initial standardization in 1998, C++ was developed by Danish computer scientist Bjarne Stroustrup at Bell Labs since 1979 as an extension of the C language; he wanted an efficient and flexible language similar to C that also provided high-level features for program organization.[10] C++20 is the next planned standard, keeping with the current trend of a new version every three years.[11]