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The Entire History of C++, I Guess

Our story starts back in 1979. In the midst of a technological revolution and the beginning of the modern computing era, Bjarne Stroustrup began work on his Ph.D. thesis for computer science at the University of Cambridge. During this time, Stroustrup used the Simula language, one designed to work primarily with simulations and object-oriented programming. While studying and using the language, he found that while it was very good at software development, it was way too slow to be actually utilized. Using his experience from his Ph.D. studies, Stroustrup began to enhance the C language by combining certain features from Simula to create a stronger, faster programming language. His language, originally called “C with Classes”, added classes and derived classes, strong types, and default arguments to Simula. Later, in 1982, C++ became the successor to C with Classes, adding many new features and functions. On top of everything from before, virtual functions, function name, operator overloading, references, constants, improves checking, and free-store memory allocation was added to further optimize Stroustrup’s coding language. C++ also came with its own standalone compiler called “Cfront”. In 1984, he introduced the first-ever stream input and output library, which had been suggested first by colleague Doug McIlroy, the same man who had introduced Unix pipes (mechanisms for inter-process communication using message passing). 1985 became the year that the first official reference for C++ was released, fittingly dubbed *The C++ Programming*

Language. It was 4 years year later that the second version of the language, C++ 2.0, was released. This time, abstract classes, multiple inheritance, static member functions, const member functions, and protected members were added. A second edition of *The C++ Programming Language* was made in 1991, and before that *The Annotated C++ Reference Manual* was published, which became the basis for the language later on. Shortly after these developments, more important features were updated in C++ such as namespaces, casts, and the Boolean type. 1998 marked the standardization of the language with C++98 with a minor update 5 years later with C++03. From this point forwards, the language developed slowly, adding relatively minor changes to keep the language fresh and up to date. In fact, it was not until C++11's release in 2011 that the language got a major update. This year saw lots more big features including an enlargement of the standard library alongside a new for loop syntax, a standard threading library (which a lot of other languages at the time already had), and better support for various aspects as well. After C++11, the next couple of updates occurred in 3-year increments with the releases of C++14, C++17, and C++20 in December 2020. For "conceptualizing and developing the C++ programming language", Bjarne Stroustrup was awarded the Charles Stark Draper Prize for Engineering in 2018 (NAE). To this day, C++'s usefulness in in-game engines and high-performance software makes it one of the most prominent coding languages in the world, only ranking 4th behind Python, C (go figure), and Java.

Works Cited

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