CS107: C++ PROGRAMMING

Dr. Tonya Pierce's "History of the C++ Programming Language"

Read this article on the history of C++ programming to see how C++ evolved into what it is today.

The 1960s

The 1960s was the birth of many new programming languages. A popular language that was a precursor of C was **ALGOL 60** which was developed as an alternative to FORTRAN, but expanded FORTRAN to include some concepts on structured programming which were later added to CPL and eventually C. ALGOL 60 was updated and released as **ALGOL 68** which included data types that were later incorporated into C. Unfortunately ALGOL had a very abstract approach to language which was very impractical for solving most commercial tasks.

1963

The release of the language **CPL** (Combined Programming language) was an attempt to create a language which could handle many of the programming tasks that were difficult with ALGOL or FORTRAN. The language was able to expand the capability of programming languages, but was very complex and difficult to learn and implement.

1967

Martin Richards developed **BCPL** (Basic Combined Programming Language). This was a much simpler language than CPL but kept most of the important features but, it too was a very abstract and large language.

1970

While working on developing the UNIX operating at Bell Labs, Ken Thompson created the **B** language. It was a port of BCPL for a specific machine and system (DEC PDP-7 and UNIX). It was designed to meet his own specific programming needs, and had a very limited use. The most serious problem was that there was no way to compile the source code into executable code. It was an interpreted language (it was translated at run time) and thus was very slow. It just wasn't adequate for developing an operating system.

1971

Dennis Ritchie, also from the Bell Labs team, began the development of a B compiler which could produce executable code for Thompson's B language. This "New B" was finally called **C**. It added new data types to the language (like **char**).

1973

Dennis Ritchie, added more improvements to the **C** language including better arrays, and pointers. **C** was more easily ported to other platforms because it was not really a high-level language. Languages like C are sometimes referred to as "medium-level languages" because they are between assembly and high-level languages in their capabilities. **C** was established as a prominent programming language with the publication of "the White Book", **The C Programming Language** by Brian Kernighan and Dennis Ritchie. This became the *de facto* standard until the publication of formal ANSI standard (ANSI X3J11 committee) in 1989.

1980

Bjarne Stroustrup, from Bell labs, began the development of the C++ language, as he felt that the C language had limitations that he wished to overcome.

1983

The name "C++" is formally adopted for the language. BTW: It was actually a play on words using the ++ increment operator from C.

1985

The first commercial release of the **C++** language. The Publication of the first edition of the book "The C++ Programming Language" by Bjarne Stroustrup.

During the 1980s the **C++** language was being refined until it became a language with its own personality but was still compatible with and included all of the original **C** language.

1989

The formal ANSI standard C was Published of the formal ANSI standard C. The formal C was actually developed, incorporating many of the structured programming aspects of C++ into the C language.

1990s

ANSI committee X3J16 began the development of a specific standard for C++. In this period C++ was greatly expanded in its use.

1998

Publication of the first standard for C++ by the ANSI committee. Today C++ is the preferred language for many in the development of professional applications on all platforms.

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