## **History of C:**

C is a middle level programming language developed by Dennis Ritchie during the early 1970s while working at AT&T Bell Labs in USA. The objective of its development was in the context of the re-design of the UNIX operating system to enable it to be used on multiple computers.

UNIX had been designed in 1969 by Ken Thompson, who wrote the system in assembly language in a DEC PDP-7 computer. Thompson made improvements and added expansion to complete the system. Brian W. Kernighan named the system UNIX, mostly written in assembly code.

However, besides assembler and FORTRAN, UNIX also included an interpreter for the programming language B. This language B was now used for improving the UNIX system. Being a high level language, B allowed much faster production of code than in assembly language. Still, B suffered from drawbacks as it did not understand data-types and did not provide the use of “structures”.

These drawbacks became the driving force for Ritchie for development of a new programming language called C. He kept most of language B’s syntax and added data-types and many other required changes. Eventually C was developed during 1971-73, containing both high-level functionality and the detailed features required to program an operating system. Hence, many of the UNIX components including UNIX kernel itself were eventually rewritten in C.

Riding on these advantages, C became dominant and spread quickly beyond Bell Labs replacing many well-known languages of that time, such as ALGOL , PL/I etc. Customization of language followed next and organizations started designing their own version of the language. This led to lack of standardization and created a new problem for system developers which forced [American National Standards Institute (ANSI)](http://www.ansi.org/" \o "American National Standards Institute" \t "/home/xeroxzen/Documents\\x/_blank) in 1983 to form a committee to establish a standard definition of C. In 1988, they established the standard definition ANSI C. Further in 1990, ANSI C was approved by the International Standards Organization (ISO) .

C99 standard was the next revision; it was published in 1999 and introduced new features like advanced data types etc.

The C language has formed the basis for many languages including C++, Java, JavaScript, Go, Rust, Limbo, LPC, C#, PHP, Python, Perl, Verilog and C-shell.

### **Benefits of C**

* As a middle level language, Ccombines the features of both high level and low level languages. It can be used for low-level programming, such as scripting for drivers and kernels and it also supports functions of high level programming languages, such as scripting for software applications etc.
* C is a structured programming languagewhich allows a complex program to be broken into simpler programs called functions. It also allows free movement of data across these functions.
* C language is case-sensitive*.*
* C is highly portableand is used for scripting system applications which form a major part of Windows, UNIX and Linux operating system.
* C is a general purpose programming language and can efficiently work on enterprise applications, games, graphics, and applications requiring calculations.
* C language has a rich library which provides a number of built-in functions. It also offers dynamic memory allocation*.*

#### **History of C++**

The origin of C++ dates back to 1979 when Bjarne Stroustrup*,*also an employee of Bell AT &T, started working on language C with classes. He borrowed desirable features from many other languages like Simula, Ada, ML, CLU and ALGOL 68. Thus, in addition to features of C language, C++ also included classes, strong type checking, default function argument and basic inheritance. Till 1983, it was called C with classes, and in 1983 it was named C++. During 1998, a joint ANSI-ISO committee released the specification for C++ language standards.

In mid-2011, C++11, a new C++ standard was released. It was considerably influenced from the Boost library project and many of the new modules were sourced directly from the corresponding Boost libraries. It also added other new features including a comprehensive randomization library, regular expression support , a new C++ time library, a standard threading library, atomics support, auto keyword, improved support for unions and array-initialization lists, new templates and container classes. C++14, released in December 2014, included smaller improvements and bug fixes over C++11.

### **Benefits of C++**

* C++ is a highly portabl*e* language and is often the language of choice for multi-device, multi-platform app development.
* C++ is an object-oriented programming languageand includes classes, inheritance, polymorphism, data abstraction and encapsulation.
* C++ has a rich function library.
* C++ allows exception handling, and function overloading which are not possible in C.
* C++ is a powerful, efficient and fast language. It finds a wide range of applications – from GUI applications to 3D graphics for games to real-time mathematical simulations.

[Software development in C and C++](https://www.invensis.net/it-outsourcing-services/c-plus-plus-application-development-services?utm_source=invensis-blog&utm_campaign=content-link&utm_medium=blog-post&utm_term=Benefits-C-plus-plus-other-programming-languages/?utm_source=invensis-blog&utm_campaign=blog-post&utm_medium=content-link&utm_term=benefits-of-c-c-plus-plus-over-other-programming-languages" \o "Specializes in developing C / C++ applications for the platform that is most suited for business objectives." \t "/home/xeroxzen/Documents\\x/_blank) continues to offer benefits for enterprises around the world, based on their business objectives.