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History Programming Languages: ALGOL, B, and C

Programming has been a big part of history, and it’s because of our deep fascination in programming that we were able to evolve our technology with consistent speed little-by-little. The history of these programming languages briefly covered in this paper are: ALGOL, B, C, C++, Java, and C#.

ALGOL started at around the 1950’s, and is short for “Algorithmic Language.” There were multiple versions of ALGOL which were: ALGOL 58, ALGOL 60, ALGOL N, ALGOL 68, and ALGOL 68. There was a meeting held at Zurich, Germany about the idea of ALGOL being set a standard for all other programming languages to follow, which, in turn, became a very important language of that era. This high level language was also designed specifically for programming scientific computations, and was used primarily used by research computer scientists in both the U.S and Europe.

The B language was created by D. M. Ritchie and K. L. Thompson in within 1969 to 1970 The B language was used primarily for non-numeric applications. Such applications included complex logical decision-making and the processing of characters, strings, and integers. B programs are usually easier to understand than assembly language programs, and programs written in B would be written much quicker than in assembly. However, a couple of cons to using the B language was that it didn’t understand the concepts of structures and data types; because of this, the C language was born. B helped further develop the UNIX system.

The C language was developed by Dennis M. Ritchie from 1971 to 1973. B was such an amazing high level language, but with cons of its own, B needed to be written in a way where it could understand data types and structures. Once that is achieved, then B could really be one of the best programming languages out there. Hence, C was born, and that’s what it essentially is. It was because of this that the entire UNIX system had to be rewritten in this new C language in its efforts to become a better operating system in 1973.

C++ started back in 1979 with the person named, “Bjarne Stroustrup” He encountered a language known as “Simula 67” which was the first language to support object oriented programming. Stroustrup wanted to incorporate what Simula 67 had into the C language. The language he created consisted of classes, inheritance, inlining, default function arguments, and strong type checking in additional to all the features of the C language. He called this language “C with classes.” The first C with classes compiler was called Cfront. It was designed to transform C with classes to C. Cfront was written in C with classes, which made it the first language to compile by itself. Unfortunately, this language was abandoned in 1993 due to the difficulty of integrating new features into it. Cfront did however make a name for itself with its self-compiling functionality, which influenced the UNIX operating system, as well as any future compilers. In 1983, “C with classes” was renamed to “C++” the “++” means that it will constantly keep changing for the better (upgrading). At that time, a couple of new features were released for the C++ language such as: Virtual Functions and Function Overloading.

Java first appeared in 1995 (When I was born). The idea for java was to have a set language for digital devices. James Gosling, Mike Sherdian, and Patrick Naughton started the whole java project in June 1971. At first the three people as a team (known as the “Green Team”) decided to name the project “Greentalk” but then they decided it didn’t sound right after a while, so they named the language “Oak” because the tree represented strength in places like the United States, France, Germany, etc. They decided to rename Oak to something better, something that best suited the language, which was unique and revolutionary. The Green Team decided it would either be “Silk” or “Java” and because java sounded much more unique and unheard of, the team stuck to that name and continued with it. Java was derived from Indonesia where the first coffee was introduced (Java Coffee). Remind me to try that coffee later.

C# is Microsoft’s version of C++, which was developed in 2000 within its .NET framework by Anders Hejlsberg and his team. The language contains imperative, declarative, functional, generic, object-oriented, and component-oriented programming aspects. C# basically equals “(C++)++”, so 4 plus signs is the meaning of ‘#’ thus, C# was created as the name, and it derived from the C and C++. C# was based on java, and, syntactically speaking, it was very picky, but very easy to learn. A programmer that is experienced in C++, Java, or C would be able to pick up exactly what C# needs in the syntax. C# utilizes new features such as: enumerations, lambda expressions, and direct memory access. Furthermore, C# is simpler than C++ for the syntax aspect of it, and therefore making it safer to use as well as getting more performance out of the language. In short, C# is C++, but more simple and easier to pick up with the assumption that the user had programming experience before.

Overall, I feel that C++ would be the more “superior” to any other language because it is more versatile and portable to use. Once I master that language, then I will feel like I can master any other programming language of my choosing.

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