C-Programming (C-00)

The C programming language is extremely popular and undoubtedly the most respected and programming language ever. One reason for its popularity is its portability and of course the speed of program execution is next. Programs written in this language are fast and efficient. The C language was developed at Bell Labs in the early 1970s by a systems programmer named Dennis Ritchie. It was written originally under an operating system called UNIX, which itself was later rewritten almost entirely in C.

The name C seems to be very cryptic, but this name was derived from the name of another programming language B, which was developed by Ken Thompson, another Bell Labs systems engineer. He had modified a language called BCPL (Basic Combined Programming Language), and named the modified language B, the first initial of BCPL. This B was later modified, expanded and improved and was named C, the next initial of BCPL. Later C also evolved into another new language, but to stop the controversy (whether to name it P or D, next alphabet), a new name was given to it and it is now known as C++ (++ is an increment operator of C language which in used to increment the value in a variable). Interestingly the C++ was also developed at Bell Labs by Bjarne Stroustup.

This language is often called a middle-level language because it permits the programmer to write their programs/codes in high-level language style (more English-like syntax) but works closer to machine as compared to other high level languages popular today (like Java, C#, Python etc.). A programmer is allowed to deal with machine at a fairly low level, which is not possible using languages like Java or Python which are very popular these days.

C is a general-purpose structured programming language which is concise, terse and extremely powerful.

This series is written with the sole purpose of C programming learning easy, because the better understanding of C will make a good foundation for learning DSA (Data Structures and Algorithms) and other programming languages. In fact almost all the other popular programming languages developed after C, were developed using C itself so some C is present in all these languages. This is the reason that after having a fair amount of proficiency in C helps in mastering the new languages easy.

The plan for learning C is as follows:

1) Elementary Programming
2) Understanding Data Types & Variables
3) Integer Arithmetic
4) Something More on Data Types
5) Strings
6) Decision Making (Conditions)
7) Repetitive Tasks (Loops)
8) More on *printf* & *scanf*
9) User-defined Functions
10) Arrays
11) Pointers
12) Structures
13) Input/Output & Files
14) Preprocessor
15) Pointers & Functions
16) Miscellaneous Features & Tit-bits
17) How C++ changed C

After this my plan is to write same kind of series on C++ or DSA.

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