

Overview of C

In this tutorial you will acquaint with a basic programming language called C. This tutorial covers the facts, the reason behind the name C, the key features of C, and applications in which the C language is utilized.

Facts About C

C is a programming language invented by Dennis Ritchie, a famous and talented programmer from AT & T Bell Laboratories of the USA in 1972. It is recognized as the first standard multipurpose programming language which is so fast, compact and versatile that even today more than 90% of the Operating Systems in the market are written in C.

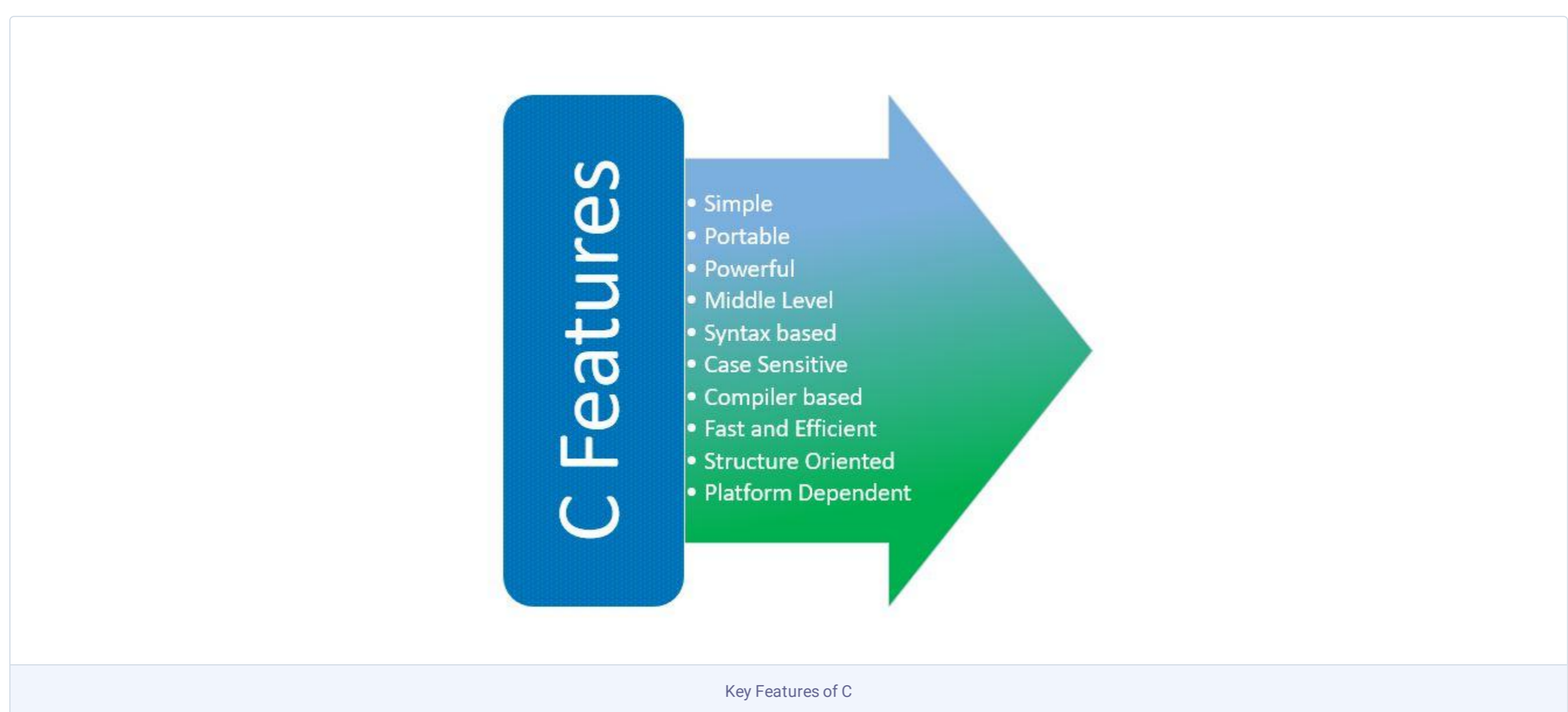
Though the invention of programming languages started in the 1960s, operating systems were still written in rigorous assembly languages. These languages were not user-friendly; very hard to understand or debug which made scientists feel the need for a user-friendly language that can control the program execution from the basic level. With an aim to build a UNIX Operating System using such a high-level language, C was developed. Later it was found to be useful and compatible with writing almost every program and consequently, it gained popularity among programmers around the world.

Why C

You may wonder why it is not named as 'A' or 'B' instead of 'C'. Actually, the secret lies in the story of the evolution of programming languages. In an attempt to develop a multipurpose programming language firstly ALGOL 60 was developed by scientists. Later Ken Thompson invented typeless languages 'BPLC' and 'B' to serve the purpose in AT & T Bell Laboratories but finally failed to meet the desired standards. The tradition of nomenclature was followed by Dennis Ritchie and thus he named its successor as 'C'.

In the 1970s programmers outside the Bell Laboratories began to define syntax and dialects of their own making the coding process pretty much confusing. At last, programmers decided to come under a common and standard set of codes and that led to the formation of the ANSI (American National Standards Institute) standard. This standardization process happened in 1989 and the basic codes for C became universal for the first time.

Key Features of C

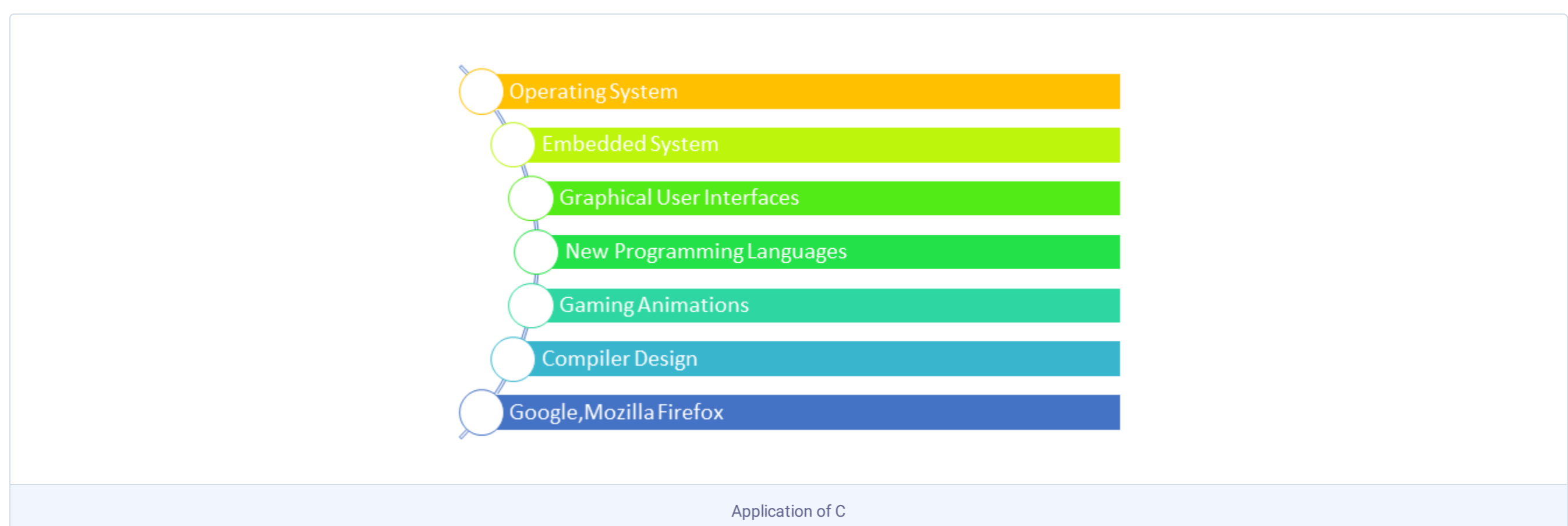


C is called the mother of all programming languages. There are plenty of arguments to justify that why we should learn C first in our journey to master the art of computer programming which are as follows:

- 1 C is the easiest of all languages invented to date. Knowledge and concepts related to C is a treasure for any learner.
- 2 It occupies a very small amount of memory space consequently running the programs very fast. Also, the user doesn't need a computer with high configuration, rather a basic one is enough to get the job done.
- 3 Most of the languages like C++, Java, etc. which were developed later are actually built using C. So, one must learn C programming to be able to understand other high-level languages.
- 4 The portability of 'C' is unmatched indeed. In other languages, you must have the source code to run a program smoothly. But the executable files in C are standalone which can run on any computer independently.
- 5 Small embedded devices like PVR or device drivers still offer a very small amount of RAM and processing of data is necessary as well. In these cases, C programming is almost inevitable even today.

Application of C

C programming is called Middle-level programming since it is close to both machines and humans. Moreover, the C language is the universal language hence it can be used in a wide variety of applications.



Some of them are listed below.

- Used in embedded systems.
- Used in the development of database engines.
- Widely used in game development.
- Used in Operating System Development
- Used to design compilers
- Unix Kernel is developed fully in C language
- Act as a base to develop new programming languages