

1) What is C Programming?

C programming is a programming language used to give instructions to a computer. It is a general-purpose and procedural language developed by Dennis Ritchie. C is mainly used to develop fast and efficient programs and is widely used in system programming such as operating systems.

2) Features of C Language

The C language is simple and easy to learn. It supports structured programming, which makes programs easy to understand and maintain. C has high execution speed and is a portable language, meaning the same program can run on different systems. It supports pointers, which help in efficient memory management, and provides rich standard libraries. C is called a middle-level language because it supports both high-level and low-level programming features.

3) Applications of C Language

C language is widely used in operating system development, embedded systems, and system software. It is also used for compiler and interpreter design, database systems, game development, and device drivers. Because of its speed and efficiency, C is preferred for performance-critical applications.

4) Difference between Compiler and Interpreter

A compiler translates the entire program at once and then executes it, which results in faster execution. All errors are displayed together after compilation. Examples of compiled languages are C and C++. An interpreter translates and executes the program line by line, which makes execution slower. Errors are shown one at a time. Examples of interpreted languages are Python and JavaScript.