

Difference between C and C++ Difficulty Level : Easy Last Updated : 14 Jun, 2022 Similarities between C and C++ are: Both the languages have a similar syntax. Same notions of stack, heap, file-scope and static variables are present in both the languages. `scanf()` and `printf()` functions are used for input/output in C. `cin` and `cout` are used for input/output in C++. Differences between C and C++ are: C++ can be said a superset of C. Major added features in C++ are Object-Oriented Programming, Exception Handling and rich C++ Library. C++ supports polymorphism, encapsulation, and inheritance because it is an object oriented programming language. C++ is known as hybrid language because C++ supports both procedural and object oriented programming paradigms. Header file used by C is `stdio.h`. Header file used by C++ is `iostream.h`. Reference variables are not supported by C. Reference variables are supported by C++. C provides `malloc()` and `calloc()` functions for dynamic memory allocation, and `free()` for memory de-allocation. C does not support polymorphism, encapsulation, and inheritance which means that C does not support object oriented programming. Below is the table of differences between C and C++:

C	C++
C was developed by Dennis Ritchie between the year 1969 and 1973 at AT&T Bell Labs.	Data is hidden by the Encapsulation to ensure that data structures and operators are used as intended. C++ provides new operator for memory allocation and delete operator for memory de-allocation. C++ is a superset of C. C contains 32 keywords. For the development of code, C supports procedural programming. Data and functions are separated in C because it is a procedural programming language. Built-in data types is supported in C. Built-in & user-defined data types is supported in C++. Function and operator overloading is not supported in C. Function and operator overloading is supported by C++. C++ is an object-driven language. Functions in C are not defined inside structures. The compilation of both the languages is similar.