

Basic concepts of C and C++

C++ is derived from C Language. It is a Superset of C.

Earlier C++ was known as C with classes.

In C++, the major change are object oriented concepts, the addition of classes and a mechanism for inheriting class objects into other classes.

Most C Programs can be compiled in C++ compiler.

C++ expressions are the same as C expressions.

All C operators and data types are valid in C++.

Following are the differences Between C and C++ :

C	C++
1. C is Procedural Language.	1. C++ is non Procedural i.e Object oriented Language.
2. No virtual Functions are present in C	2. The concept of virtual Functions are used in C++.
3. In C, Polymorphism is not possible.	3. The concept of polymorphism is used in C++. Polymorphism is the most Important Feature of OOPS.
4. Operator overloading is not possible in C.	4. Operator overloading is one of the greatest Feature of C++.
5. Top down approach is used in Program Design.	5. Bottom up approach adopted in Program Design.
6. No namespace Feature is present in C Language.	6. Namespace Feature is present in C++ for avoiding Name collision.
7. Multiple Declaration of global variables are allowed.	7. Multiple Declaration of global variables are not allowed.
8. In C <ul style="list-style-type: none">• scanf() Function used for Input.• printf() Function used for output.	8. In C++ <ul style="list-style-type: none">• Cin>> Function used for Input.• Cout<< Function used for output.

9. Mapping between Data and Function is difficult and complicated.

10. In C, we can call main() Function through other Functions

11. C requires all the variables to be defined at the starting of a scope.

12. No inheritance is possible in C.

13. In C, malloc() and calloc() Functions are used for Memory Allocation and free() function for memory Deallocating.

14. It supports built-in and primitive data types.

15. In C, Exception Handling is not present.

16. Programs are divided into modules and functions.

17. C is a middle level language.

18. In C, the data is not secured.

19. C follows top down approach.

20. C uses scanf() and printf() function for standard input and output.

9. Mapping between Data and Function can be used using "Objects"

10. In C++, we cannot call main() Function through other functions.

11. C++ allows the declaration of variable anywhere in the scope i.e at time of its First use.

12. Inheritance is possible in C++

13. In C++, new and delete operators are used for Memory Allocating and Deallocating.

14. It support both built-in and user define data types.

15. In C++, Exception Handling is done with Try and Catch block.

Programs are divided into classes and functions.

C++ is a high level language.

Data is hidden and can't be accessed by external functions.

C++ follows bottom up approach

C++ uses cin>> and cout<< for standard input and output.