

① What is C language?

① C is a general-purpose, procedural, and imperative programming language developed in 1972 by Dennis Ritchie at Bell Labs. It's one of the most influential and widely used programming languages of all time.

② Applications of C programming?

① C is a versatile language with a wide range applications:

⇒ C is widely used to build operating systems because it is fast and close to hardware. Ex: windows OS parts.

⇒ C is used in small, low-level devices where efficiency is important. Ex: microcontrollers (Arduino, PIC, ARM)

⇒ C is ideal for developing system-level tools.
Ex: compilers (GCC), interpreters, device & network drivers.

⇒ C is used for performance-critical parts of games.
Ex: Game engines, physics engines.

③ What is variable?

⇒ Variables act like containers which are used to store the information. Informations - floats, variables.

⇒ Data type decides what type of information holds in the variable.

④ What are different data types in C programming?

In C programming, data types define the type of data a variable can store. They help the compiler understand how much memory to allocate and how to interpret the stored value.

C data types are classified as:

1. Basic types :- int, float, double, char.

2. Derived types :- arrays, pointers, functions.

3. Enumeration types :- enum

4. User-defined types :- struct, union, typedef.

⑤ what is format specifier?

⇒ format specifier tells the what type of information holds in the variable.

⇒ format specifiers are special characters used in c programming to specify the format of input/output operations, such as `printf()` and `scanf()`.