Tokens

Tokens are the smallest elements of a program. We cannot create a word without using words similarly we cannot create a program without using tokens.

This tokens are meaningful for the compilers the compilers already know the meaning of this tokens and based on it compiler break a program into various possible small units and execute them.

The list of tokens present in C ++ are; --

1. Keywords
2. Identifiers
3. Constants
4. Operators
5. Special symbols
6. Variables

Keywords

Keywords are pre-define or reserved word for any programming languages. Keywords are related to some specific task or function. When we use these keywords in our program that specific function is triggered. The compiler already knows the meaning of these keywords. Name of the keywords cannot be used as a variable name because their task (meaning is already define) we cannot re assign a different task to them.

There are 32 reserved keyword in C ++

There are 52 reserved keyword in Java

Ex- return, break, for, do, if, sizeof, switch, default, else, int, case, switch etc

Identifiers

Identifiers are used for naming the class, variables, methods etc and must be unique. The rules for using identifiers are:--

1. Identifiers cannot be used as a keywords
2. The only allowed character for identifiers are [A-Z], [a-z], [0-9], $, _,
3. The identifiers should not start with [0-9].
4. The identifiers can start with a '_' (underscore)
5. Identifiers are case sensitive which means for an identifiers meaning of capital and small letter is different.
6. Identifiers should be meaningful short and unique.

Constants or literals

Constants are like normal variables but their values are fixed. Once we declare them we cannot change their values throughout the program.

In C ++ const int LENGTH= 10;

In Java Final float pi=3.14f;

Operators

Operators are symbols used for Arithmetic and logical operations

List of operators are; --

a. Unary operator
b. Binary operator

List of Binary operators are : --

1. Arithmetic operators (+. -, *, /, %)
2. Logical operator (|| or, && and, ! not)
3. Bitwise operator (<< left shift operator, >> right shift operator, ~ tiled,)
4. Increment and decrement operator (++, --)
5. Assignment operator (=)

Special symbols

1. Brackets []
2. Parentheses ()
3. Braces {}
4. Comma .

Etc.

Variables

Variable are uses to store data in memory. Variables are the size and name of the memory location. Using variables we can referee a memory location of a computer