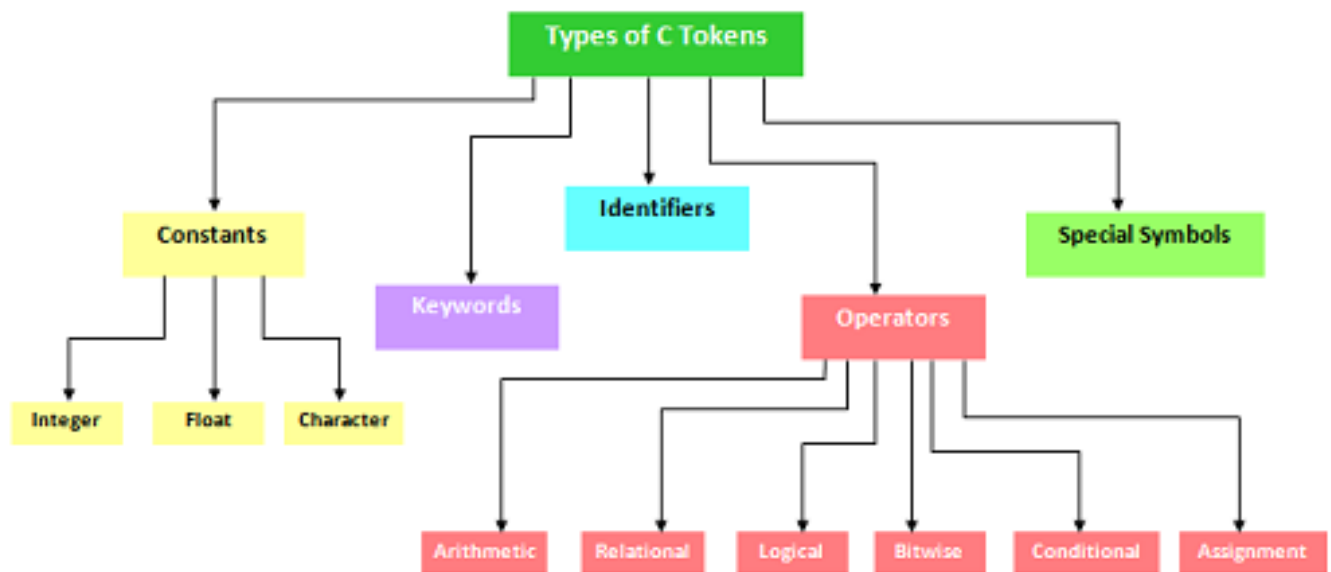


## What is Token?

**TOKEN** is the smallest unit in a 'C' program. It is each and every word and punctuation that you come across in your C program.

The compiler breaks a program into the smallest possible units (tokens) and proceeds to the various stages of the compilation. A token is divided into six different types, viz, Keywords, Operators, Strings, Constants, Special Characters, and Identifiers.



## Keywords

Keywords are predefined, reserved words used in programming that have special meanings to the compiler. These meaning cannot be changed.

Thus, keywords cannot be used as variable names because that would try to change the existing meaning of the keyword, which is not allowed. (Don't worry if you do not know what variables are, you will soon understand.) Keywords are part of the syntax and they cannot be used as an identifier.

There are only 32 keywords in C. As C is a case sensitive language, all keywords must be written in lowercase. Here is a list of all keywords allowed in ANSI C.

auto	double	int	struct
break	else	long	switch
case	enum	register	typedef
char	extern	return	union
const	float	short	unsigned
continue	for	signed	void
default	goto	sizeof	volatile
do	if	static	while

All these keywords, their syntax, and application will be discussed in their respective topics.

## Identifiers

Identifier refers to name given to entities such as variables, functions, structures etc. Identifiers must be unique. They are created to give a unique name to an entity to identify it during the execution of the program. For example:

```
int accountNumber;  
double accountBalance;
```

Also remember, identifier names must be different from keywords. You cannot use int as an identifier because int is a keyword.

### *Rules for an Identifier*

1. An Identifier can only have alphanumeric characters(a-z , A-Z , 0-9) and underscore(\_).
2. The first character of an identifier can only contain alphabet(a-z , A-Z) or underscore (\_).
3. Identifiers are also case sensitive in C. For example name and Name are two different identifiers in C.
4. Keywords are not allowed to be used as Identifiers. like `int`, `while` etc. as identifiers.
5. No special characters, such as semicolon, period, whitespaces, slash or comma are permitted to be used in or as Identifier.
6. There is no rule on how long an identifier can be. However, you may run into problems in some compilers if the identifier is longer than 31 characters.

When we declare a variable or any function in C language program, to use it we must provide a name to it, which identified it throughout the program, for example:

```
Int myvariable = "precat"
```

Here **myvariable** is the name or identifier for the variable which stores the value "precat" in it.