

C - BASIC SYNTAX

http://www.tutorialspoint.com/cprogramming/c_basic_syntax.htm

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You have seen a basic structure of C program, so it will be easy to understand other basic building blocks of the C programming language.

Tokens in C

A C program consists of various tokens and a token is either a keyword, an identifier, a constant, a string literal, or a symbol. For example, the following C statement consists of five tokens:

```
printf("Hello, World! \n");
```

The individual tokens are:

```
printf  
(  
"Hello, World! \n"  
)  
;  
;
```

Semicolons ;

In C program, the semicolon is a statement terminator. That is, each individual statement must be ended with a semicolon. It indicates the end of one logical entity.

For example, following are two different statements:

```
printf("Hello, World! \n");  
return 0;
```

Comments

Comments are like helping text in your C program and they are ignored by the compiler. They start with `/*` and terminates with the characters `*/` as shown below:

```
/* my first program in C */
```

You cannot have comments within comments and they do not occur within a string or character literals.

Identifiers

A C identifier is a name used to identify a variable, function, or any other user-defined item. An identifier starts with a letter A to Z or a to z or an underscore `_` followed by zero or more letters, underscores, and digits `0to9`.

C does not allow punctuation characters such as `@`, `$`, and `%` within identifiers. C is a **case sensitive** programming language. Thus, *Manpower* and *manpower* are two different identifiers in C. Here are some examples of acceptable identifiers:

```
mohd      zara      abc      move_name  a_123  
myname50  _temp     j        a23b9     retVal
```

Keywords

The following list shows the reserved words in C. These reserved words may not be used as constant or variable or any other identifier names.

```
auto      else      long      switch
```

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

Whitespace in C

A line containing only whitespace, possibly with a comment, is known as a blank line, and a C compiler totally ignores it.

Whitespace is the term used in C to describe blanks, tabs, newline characters and comments. Whitespace separates one part of a statement from another and enables the compiler to identify where one element in a statement, such as int, ends and the next element begins. Therefore, in the following statement:

```
int age;
```

There must be at least one whitespace character *usually space* between int and age for the compiler to be able to distinguish them. On the other hand, in the following statement:

```
fruit = apples + oranges; // get the total fruit
```

No whitespace characters are necessary between fruit and =, or between = and apples, although you are free to include some if you wish for readability purpose.

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