C Syntax

Operators

Symbol	Description
( )	Grouping
->	Structure pointer
!	Logical negation
~	One's complement
++	Increment
-	Subtraction
*	Multiplication
&	Address
sizeof	Size in bytes
*	Indirection
/	Division
%	Modules
+	Addition
–	Decrement
<<	Left shift
>>	Right shift
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
==	Equality
&	Bitwise AND
!=	Inequality
^	Bitwise exclusive OR
|	Bitwise inclusive OR
&&	Logical AND
||	Logical OR
?:	Conditional expression
|=	Bitwise inclusive OR assignment
^=	Bitwise exclusive OR assignment
+=	Addition assignment
-=	Subtraction assignment
*=	Multiplication assignment
/=	Division assignment
%=	Multiplication assignment
>>=	Right shift assignment
<<=	Left shift assignment
&=	Bitwise and assignment
,	Sequential evaluation

Statements

if (expr**)**stmt; [else stmt;]
while (expr**)** stmt;
do stmt **while (**expr**);**
for (expr1**;** expr2**;** expr3**)**stmt;
switch (expr**) {[case** cexpr**:** stmt**;**];[**default:**stmt]...**}**
return [expr];
goto label**;**
label: stmt;
break;
continue;
expr**;**
;
{[stmt]...}

[ ]... indicates zero or more
Note: Items in the [ ] are optional

Data Declaration

Declarator

[const] [*] id [[cexpr]]... [=init]	
enum	[id] {[id[=cexpr]}
struct/union	[id] { [type-qualifier[[*] id cexpr [cexpr]]]}
typedef	[type-qualifier] [type-specifier] [declarator];

Type Specifiers

int	By default the same as int8
long	By default the same as int16
char	Defines an 8 bit character
float	Defines a 32 bit floating point number
short	By default the same as int1
void	Indicates no specific type
int1	Defines a 1 bit number
int8	Defines an 8 bit number
int16	Defines a 16 bit number
int32	Defines a 32 bit number

Type Qualifiers

static	Variable is globally active and initialized to 0
auto	Variable exists only while the procedure is active
extern	Is allowed as a qualifier, however is has no effect.
register	Is allowed as a qualifier, however is has no effect.

PO Box 2452, Brookfield, WI 53008

Telephone: 262.797.0455

Sales: ext. 35   Technical Support: ext. 32

Visit our website at *http://www.ccsinfo.com/*

The Most Popular C Compiler

for the PICmicro7MCU