

Precedence

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- **Precedence**
 - the order in which different operations are grouped in an expression.
- **Associatively**
 - the order in which like operations with the same precedence are grouped.
- **Parenthesis**
 - can be used in an expression to change the natural order of the evaluation of the expression

Precedence

- Example

```
/* val is assigned the value 70 */
val = 2 * ( 4 + 3 ) * 5;

/* dereferences field_ptr */
*struct_ptr->field_ptr;

/* dereferences struct_ptr */
(*struct_ptr).field_ptr;
(equiv. to struct_ptr->field_ptr)

/* combined cast and precedence */
/* ptr is a pointer to a pointer to a struct */
func( void * ptr )
{
    if ( (( struct ST_tag * )ptr)->field_elm == 0 )
        --- etc ---
}
```

Precedence

Order	Operators	Associates	Operator Type
1	() [] -> .	Left	Primary & Access
2	! ~ ++ -- + - * & (type) sizeof()	Right (<i>Postfix Left Assoc</i>)	Unary
3	* / %	Left	Multiplicative
4	+ -	Left	Additive
5	<< >>	Left	Bitwise Shift
6	< <= > >=	Left	Relational
7	= !=	Left	Equality
8	&	Left	Bitwise AND
9	^	Left	Bitwise XOR
10		Left	Bitwise OR
11	&&	Left	Logical AND
12		Left	Logical OR
13	?:	Right	Conditional
14	= += -= *= /= %= &= ^= = <<== >>==	Right	Assignment
15	,	Left	Sequential Eval.