

# C Fundamentals

Comments

Operators

Keywords

Identifiers

Relational operators

Logical operators

Assignment operators

Arithmetic operators

Constants

Data Types

User Defined

Primitive/Basic Types

enum

typedef

Real Values

Integer Values

Derived

Arrays

structure

pointer

union

unsigned  
signed

Conditional operators

`min = (x < y) ? x : y;`

Identifier = (test expression) ? Expression1 : Expression2 ;

Comma operators

`int i , j;`

`i=(j=10,j+20);`

A set of expression separated by comma is a valid constant in the C language

Bitwise Operators

~ Bitwise Negation one's complement (unary)

& Bitwise And

| Bitwise Or

^ Bitwise Exclusive Or

>> Right Shift by right hand side (RHS) (divide by power of 2)

<< Left Shift by RHS (multiply by power of 2)

Control Statements

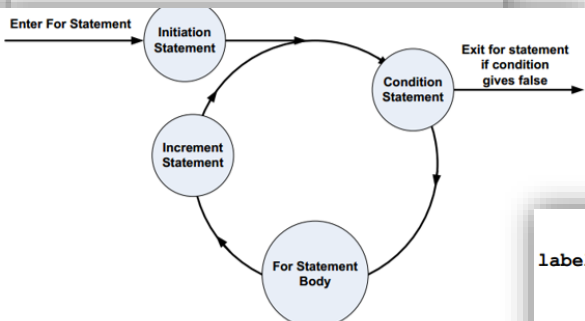
- if
- switch
- goto
- for loop
- while loop
- do-while loop
- break
- continue
- Nested Loop

```
for(i=0;i<10;i++)
{
    if(i==5)
    {
        printf("\nComin,
        break;
    }
    printf("%d ",i);
}
```

```
for(i=0;i<10;i++)
{
    if(i==5 || i==6)
    {
        printf("\nSkippi
        continue;
    }
    printf("%d ",i);
}
```

```
for ( init; condition; increment ) {
    for ( init; condition; increment ) {
        statement(s);
    }
}
```

```
for (/*initiation*/; /*condition*/; /*increment*/)
{
    //for body
}
```



Statements

- null statement ;
- expression statement ;

```
while (/*condition*/)
{
    //while body
}
```

```
do
{
    //do...while body
}
while (/*condition*/);
```

```
if (/*if condition*/)
{
    //if body
}
else if (/*else if condition*/)
{
    //else if body
}
else if (/*else if condition*/)
{
    //else if body
}
else
{
    //else body
}
```

```
switch (/*switch expression*/)
{
    case /*case value*/:
        //case body
        break;
    ...
    case /* case value*/:
        //case body
        break;
    default:
        {
            //case body
        }
        break;
}
```

```
// C Statment
labelname:
// C Statment
// C Statment
// C Statment
goto labelname;
// C Statment
```

```
// C Statment
goto labelname;
// C Statment
// C Statment
// C Statment
labelname:
// C Statment
```

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<https://www.facebook.com/groups/embedded.system.KS/>