

# C - IF...ELSE STATEMENT

[http://www.tutorialspoint.com/cprogramming/if\\_else\\_statement\\_in\\_c.htm](http://www.tutorialspoint.com/cprogramming/if_else_statement_in_c.htm)

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An **if** statement can be followed by an optional **else** statement, which executes when the boolean expression is false.

## Syntax:

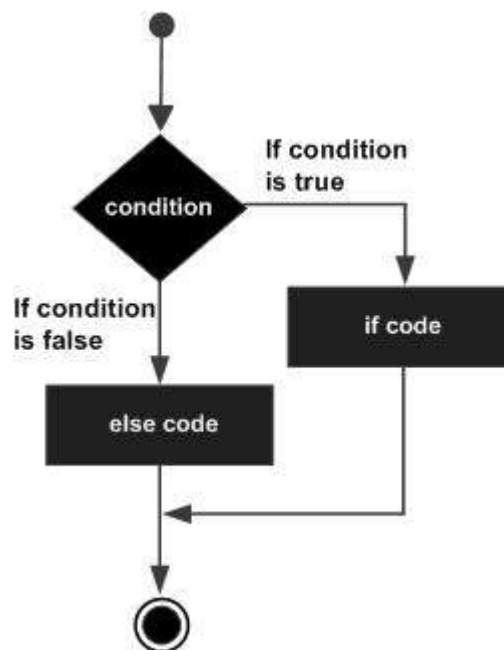
The syntax of an **if...else** statement in C programming language is:

```
if(boolean_expression)
{
    /* statement(s) will execute if the boolean expression is true */
}
else
{
    /* statement(s) will execute if the boolean expression is false */
}
```

If the boolean expression evaluates to **true**, then the **if block** of code will be executed, otherwise **else block** of code will be executed.

C programming language assumes any **non-zero** and **non-null** values as **true**, and if it is either **zero** or **null**, then it is assumed as **false** value.

## Flow Diagram:



## Example:

```
#include <stdio.h>

int main ()
{
    /* local variable definition */
    int a = 100;

    /* check the boolean condition */
    if( a < 20 )
    {
        /* if condition is true then print the following */
        printf("a is less than 20\n" );
    }
}
```

```

else
{
    /* if condition is false then print the following */
    printf("a is not less than 20\n" );
}
printf("value of a is : %d\n", a);

return 0;
}

```

When the above code is compiled and executed, it produces the following result:

```

a is not less than 20;
value of a is : 100

```

## The if...else if...else Statement

An **if** statement can be followed by an optional **else if...else** statement, which is very useful to test various conditions using single if...else if statement.

When using if , else if , else statements there are few points to keep in mind:

- An if can have zero or one else's and it must come after any else if's.
- An if can have zero to many else if's and they must come before the else.
- Once an else if succeeds, none of the remaining else if's or else's will be tested.

## Syntax:

The syntax of an **if...else if...else** statement in C programming language is:

```

if(boolean_expression 1)
{
    /* Executes when the boolean expression 1 is true */
}
else if( boolean_expression 2)
{
    /* Executes when the boolean expression 2 is true */
}
else if( boolean_expression 3)
{
    /* Executes when the boolean expression 3 is true */
}
else
{
    /* executes when the none of the above condition is true */
}

```

## Example:

```

#include <stdio.h>

int main ()
{
    /* local variable definition */
    int a = 100;

    /* check the boolean condition */
    if( a == 10 )
    {
        /* if condition is true then print the following */
        printf("Value of a is 10\n" );
    }
    else if( a == 20 )
    {
        /* if else if condition is true */
    }
}

```

```
    printf("Value of a is 20\n" );
}
else if( a == 30 )
{
    /* if else if condition is true */
    printf("Value of a is 30\n" );
}
else
{
    /* if none of the conditions is true */
    printf("None of the values is matching\n" );
}
printf("Exact value of a is: %d\n", a );

return 0;
}
```

When the above code is compiled and executed, it produces the following result:

```
None of the values is matching
Exact value of a is: 100
```