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If-else Statement in C

```
if (condition)
{
/* Statements inside the body of
'if' logical condition */
}
else
{
/* Statements inside the body of
'else' logical condition */
}
```

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Introduction to If-else Statement in C

If else Statement in C programming language, when we need to execute a block of statements, that too when a particular condition is met or not met that situation is known as decision making. In C programming, the decision-making process is used to specify certain orders in

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The 'if' conditional statements are as below:

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1. if statement

2. if-else statement (https://www.educba.com/if-else-statement-in-matlab/)

3. Nested if-else statement

4. else-if statement (https://www.educba.com/else-if-statement-in-java/)

Syntaxes

Below are some syntax of if statement in c (https://www.educba.com/if-statement-in-c/) is as

follows

1. The syntax for if statement

```
if(condition or statement)
{
/* statement inside the if body */
}
/* statement outside the if body */
```

2. The syntax for if-else statement

```
if (condition)
```

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```
/* Statements inside the body of 'else' logical condition */

}
```

3. The syntax for nested if-else statement

```
if( condition or statement )

{

if( expression1 )

{

/* statement1 */

}

else

{

/* statement2 */

}

}

else

{

/* statement3*/

}
```

4. Syntax for else-if statement

```
if(condition1)

{

/* statement1 */
```

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```
}
else if(condition3 )
{
/* statement3 */
}
else
/* default statement */
```

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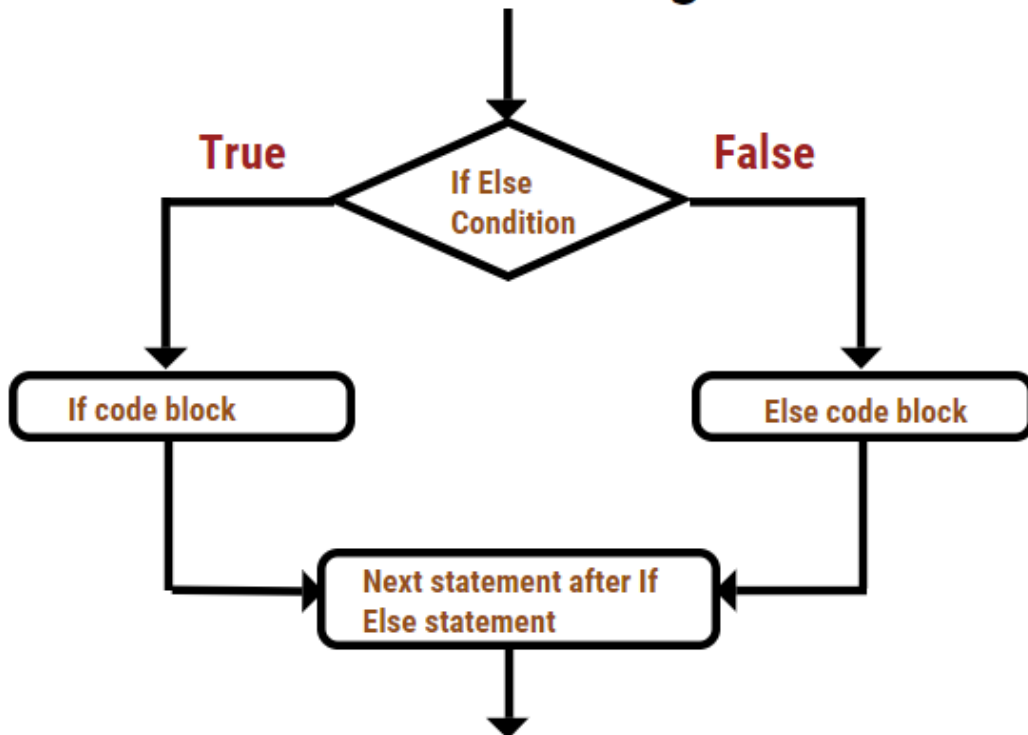development/courses/c-course/?btnz=edu-blg-inline-banner1)

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If Else Flow Diagram

True   If Else Condition   False

If code block

Else code block

Next statement after If Else statement

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For example:

Program for Checking given number is positive or negative
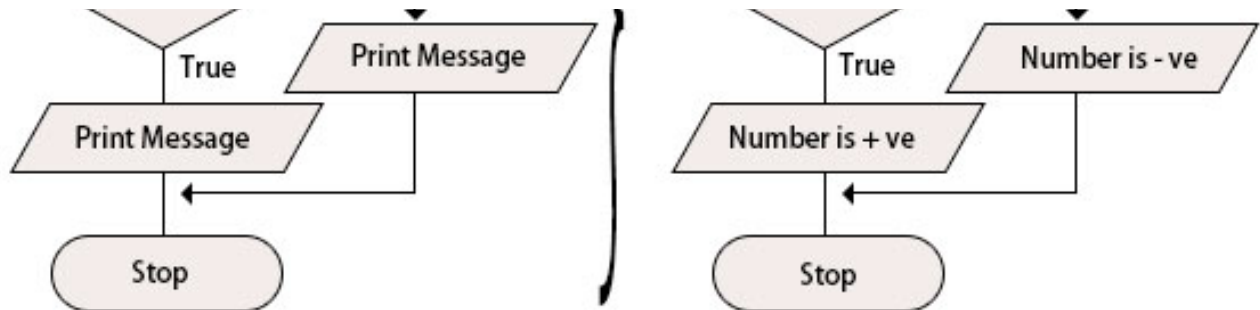
Start   E.g.   Start

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How if-else Statement Works in C?

Basically, if the condition returns to be true then the statements mentioned inside the body of the logical 'if' are met or executed and the statements inside the body of 'else' are skipped. Similar way, if the condition returns as false in the logic then the statements inside the body of 'if' are skipped and the statements inside the 'else' are executed. To understand the concept better, let's take an example of "xyz expression":

If the "xyz expression" is considered to be **true** then,

- The statement(s) under the 'if' condition is returned.
- The statement(s) under the 'else' condition is ignored from execution.

If the "xyz expression" is considered to be **false** then,

- The statement(s) under the 'else' condition is returned.
- The statement(s) under the 'if' condition is ignored from execution.

For example:

Expression is True
int test = 5;

Expression is False
int test = 5;

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// body of else
}

// body of else
}

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Examples

Let's take an example of a Boolean expression with the help of actual coding in C: If the condition is met (true) as per the given logical expression, then the program will print the statements under 'if' and if the condition is not met (false) then the program will print the statements which are under 'else' and below the 'if-else.'

Example #1

To print a simple 'if' condition:

Code:

```c
#include <stdio.h>
int main( )
{
int a, b;
a = 15;
b = 10;
if (a > b )

{
printf("a is greater than b");
}
```

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To check whether a number is greater or less than a specific number

Code:

```c
#include <stdio.h>
int main ()
{
int a = 10; /* local variable definition */
if( a > 5 ) /* check the boolean condition */
{
printf("Yes, a is greater than 5" ); /* if the condition is true
then print this */
}
else
{
printf("No, a is less than 5" ); /* if the condition is false then
print this */
}
printf("The value of a is: %d", a);
return 0;
}
```

Output: Yes, a is greater than 5

The value of a is: 10

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Code:

```c
#include <stdio.h>
int main( )
{
int a, b, c;
printf("Please enter three numbers: ");
scanf("%d%d%d",&a, &b, &c);
if(a > b)
{
if(a > c){printf("a is the greatest among the three"); }
else{printf("c is the greatest among the three");}
}
else
{
if(b > c){printf("b is the greatest among the three");}
else{printf("c is the greatest among the three");}
}
}
```

Example #4

To check if an input number is divisible by 2 or 3:

Code:

```c
#include <stdio.h>
```

```
scanf("%u", &a);

if(a%2 == 0 && a%3 == 0)

{

printf("The entered number is divisible by both 2 and 3");

}

else if(a%2 == 0)

{

printf("The entered number is divisible by 2");

}

else if(a%3 == 0)

{

printf("The entered number is divisible by 3");

}

else

{

printf("The entered number is divisible by neither 2 nor 3");

}

}
```

Conclusion

In this article, we have discussed if-else conditional statements and how it works with a

Diagram and a Program, based on a given condition for C programming language, which is

similar to any other programming language. If we ignore the 'else' part of the program

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This has been a guide to If-else Statement in C. Here we discuss an introduction to If-else

Statement in C, how does it work with proper coding and output along with examples and a

flow diagram. You can also go through our other suggested articles to learn more –

1. C# if Statement (https://www.educba.com/c-sharp-if-statement/)
2. If Else Statement in Python (https://www.educba.com/if-else-statement-in-python/)
3. if else Statement in C++ (https://www.educba.com/if-else-statement-in-c-plus-plus/)
4. if else Statement in PHP (https://www.educba.com/if-else-statement-in-php/)

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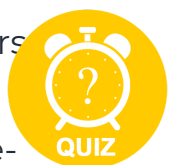
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