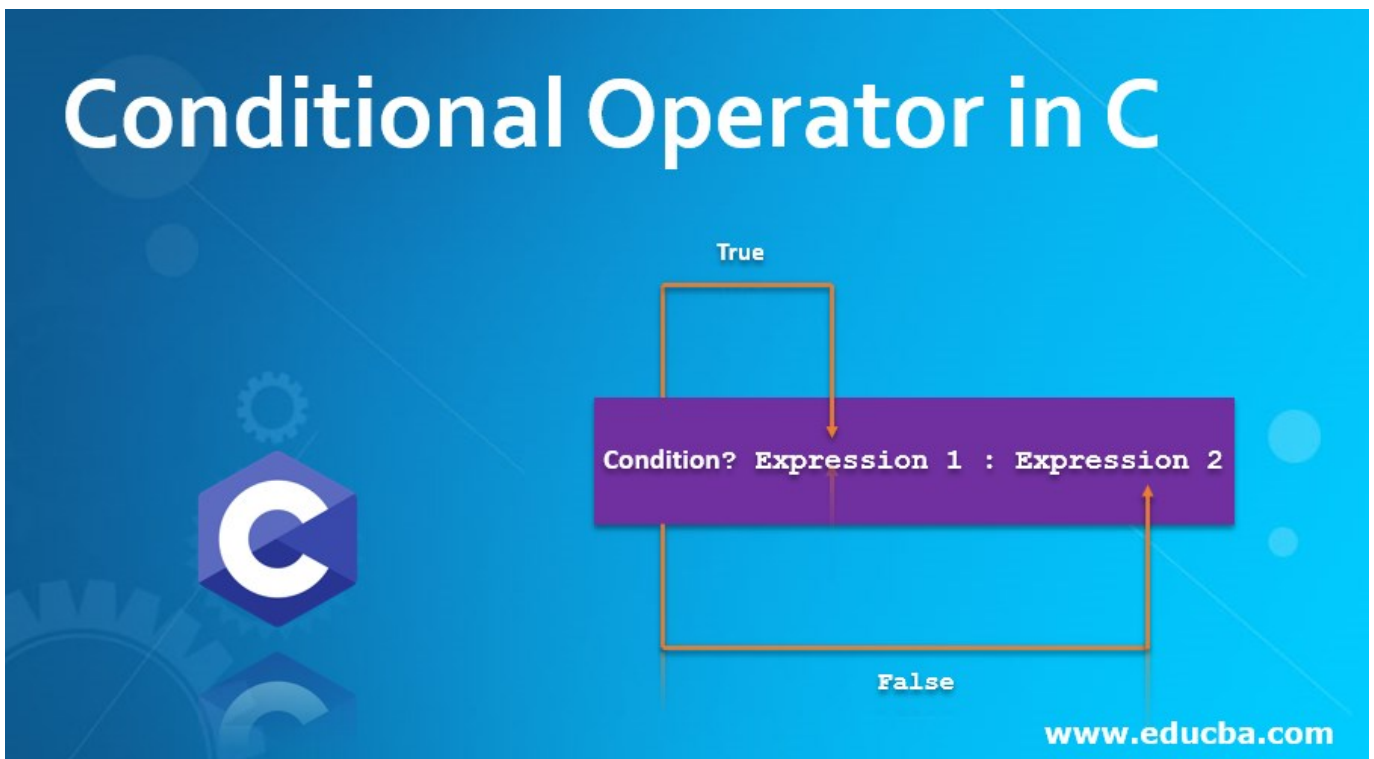




(<https://www.educba.com/software-development/>)

← (<https://www.educba.com/logical-operators-in-c/>)

→ (<https://www.educba.com/modulus-operator-in-c/>)



Introduction to Conditional Operator in C

If we break these two words then the operator means a symbol that operates on some while a condition is something that can be applied to the operator to perform some specific operations. The conditional operator has two value and it shows the output value based on the





(<https://www.educba.com/software-development/>)

declaring a condition operator in C programming :

Start Your Free Software Development Course

Web development, programming languages, Software testing & others

Condition ? True_value : False_value

Therefore, according to the syntax, we can put our condition where it is written then if that condition holds true it will evaluate to the first statement otherwise it will go to the second condition.

For example :

Expression 1 ? Expression 2 : Expression 3

Expression 1 is the condition part and rests both of the expressions are a statement on which the condition will depend.

How Does Conditional Operators Work in C?

Now let's see how does conditional operators works in C programming and how to implement these conditions in our C code. But first, we will see types of Conditional operators and their uses:





(<https://www.educba.com/software-development/>)

	This conditional operator will return a true value if either of the given conditions is true.
!	This conditional operator will return a true value if the given condition is false.
&	This conditional operator will return a true value if both the given conditions are true and Boolean.
	This conditional operator will return a true value if either of the given conditions is true and Boolean.
^	This conditional operator will return a true value if both the given conditions are different.

Examples to Implement Conditional Operator in C

We will use these operators to understand the working of conditional operators in C with implementation.

🔗 Popular Course in this category



C Programming Training (3 Courses, 5 Project)

3 Online Courses | 5 Hands-on Projects | 34+ Hours | Verifiable Certificate of Completion | Lifetime Access

★★★★★ 4.5 (8,598 ratings)





[\(https://www.educba.com/software-development/\)](https://www.educba.com/software-development/)

Related Courses

C++ Training (4 Courses, 5 Projects, 4 Quizzes) (<https://www.educba.com/software-development/courses/c-course/?btnz=edu-blg-inline-banner1>)

Java Training (40 Courses, 29 Projects, 4 Quizzes) (<https://www.educba.com/software-development/courses/java-course/?btnz=edu-blg-inline-banner1>)

Example #1

Code:

```
#include <stdio.h>

int main()
{
    int p = 20 , q = 20 , r = 30 , outcome ;
    outcome = ( p == q ) && ( r > q ) ;
    printf ( " The result of ( p == q ) && ( r > q ) is %d \n " ,
    outcome ) ;
    outcome = ( p == q ) && ( r < q ) ;
    printf ( " The result of ( p == q ) && ( r < q ) is %d \n " ,
    outcome ) ;
    outcome = ( p == q ) || ( r < q ) ;
    printf ( " The result of ( p == q ) || ( r < q ) is %d \n " ,
    outcome ) ;
    outcome = ( p != q ) || ( r < q ) ;
    printf ( " The result of ( p != q ) || ( r < q ) is %d \n " ,
```





(<https://www.educba.com/software-development/>)

```
printf ( " The result of ( p == q ) is %d \n" , outcome , );
return 0 ;
}
```

Output:

```
The result of ( p == q ) && ( r > q ) is 1
The result of ( p == q ) && ( r < q ) is 0
The result of ( p == q ) || ( r < q ) is 1
The result of ( p != q ) || ( r < q ) is 0
The result of ! ( p == q ) is 1
The result of ! ( p == q ) is 0
```

In the above code, we have declared 4 integers p, q, r, and outcome in which outcome will store the outcome of all the applied conditions on the remaining 3 integer variables. Then one by one we applied these &&, ||, and != operations on the declared variables. So the values will be compared as per the mentioned code and results will be stored in outcome integer.

Example #2

Code:

```
#include <stdio.h>

int main()
{
    int marks_obtained ;
    printf ( " Please enter the obtained marks : " ) ;

    scanf ( " %d " , &marks_obtained ) ;

    if ( marks_obtained >= 36 )
        printf ( " \n Congratulations!! You Passed " ) ;
```





[\(https://www.educba.com/software-development/\)](https://www.educba.com/software-development/)

Input:

37

Output:

Please enter the obtained marks :
Congratulations!! You Passed

Example #3

Code:

```
#include <stdio.h>

int main()
{
    int marks_obtained ;
    printf ( " Please enter the marks obtained : " ) ;
    scanf ( " %d " , &marks_obtained ) ;
    puts ( marks_obtained >= 36 ? " Congratulations!! You Passed" : "
    You Failed " ) ;
    return 0 ;
}
```

Input:

37





[\(https://www.educba.com/software-development/\)](https://www.educba.com/software-development/)

If you compare the last two codes they are performing the same operations with exact same integers and condition. The only difference we can see in the last second is using if else condition to check the condition of the mark and then displaying the output whereas, in the last code, we are using conditional operators to perform the same operation with exact same integers and obtained marks value. Therefore, to display why conditional operators are used, you can see from the last two codes that using a conditional operator instead of using if-else can save a few lines of code. Apart from this, it is more efficient as if one condition is already true then the compiler won't even go to the rest of the condition which will save compilation and execution time both. In terms of memory, a conditional operator will also save space.

Conclusion

conditional operators in C plays a crucial role as it saves a lot of time because instead of putting an if-else loop we can use these operators because we only have to write two conditions in one line which saves time and space both by making efficient code.

Recommended Articles

This is a guide to Conditional Operator in C. Here we also discuss the introduction and how does conditional operators work in c along with different examples and its code implementation. You may also have a look at the following articles to learn more –

1. [Logical Operators in C \(https://www.educba.com/logical-operators-in-c/\)](https://www.educba.com/logical-operators-in-c/)
2. [File Handling in C \(https://www.educba.com/file-handling-in-c/\)](https://www.educba.com/file-handling-in-c/)
3. [Nested if Statement in C \(https://www.educba.com/nested-if-statement-in-c/\)](https://www.educba.com/nested-if-statement-in-c/)
4. [Assignment Operators in C \(https://www.educba.com/assignment-operators-in-c/\)](https://www.educba.com/assignment-operators-in-c/)





[\(https://www.educba.com/software-development/\)](https://www.educba.com/software-development/)

- ☒ 34+ Hours
- ☒ Verifiable Certificate of Completion
- ☒ Lifetime Access

Learn More

<https://www.educba.com/software-development/courses/c-programming-course/?btnz=edublginlinebanner3>

About Us

Blog (<https://www.educba.com/blog/?source=footer>)

Who is EDUCBA? (<https://www.educba.com/about-us/?source=footer>)

Sign Up (<https://www.educba.com/software-development/signup/?source=footer>)

Corporate Training (<https://www.educba.com/corporate/?source=footer>)

Certificate from Top Institutions (<https://www.educba.com/educbalive/?source=footer>)

Contact Us (<https://www.educba.com/contact-us/?source=footer>)





[\(https://www.educba.com/software-development/\)](https://www.educba.com/software-development/)

Privacy Policy (<https://www.educba.com/privacy-policy/?source=footer>)

Apps

iPhone & iPad (<https://itunes.apple.com/in/app/educba-learning-app/id1341654580?mt=8>)

Android (<https://play.google.com/store/apps/details?id=com.educba.www>)

Resources

Free Courses (<https://www.educba.com/software-development/free-courses/?source=footer>)

Java Tutorials (<https://www.educba.com/software-development/software-development-tutorials/java-tutorial/?source=footer>)

Python Tutorials (<https://www.educba.com/software-development/software-development-tutorials/python-tutorial/?source=footer>)

All Tutorials (<https://www.educba.com/software-development/software-development-tutorials/?source=footer>)

Certification Courses

All Courses (<https://www.educba.com/software-development/courses/?source=footer>)

Software Development Course - All in One Bundle
(<https://www.educba.com/software-development/courses/software-development-course/?source=footer>)

Become a Python Developer (<https://www.educba.com/software-development/courses/python-certification-course/?source=footer>)

Java Course (<https://www.educba.com/software-development/courses/java-course/?source=footer>)





<https://www.educba.com/software-development/>

VB.NET Course (<https://www.educba.com/software-development/courses/vb-net-course/?source=footer>)

PHP Course (<https://www.educba.com/software-development/courses/php-course/?source=footer>)

© 2020 - EDUCBA. ALL RIGHTS RESERVED. THE CERTIFICATION NAMES ARE THE TRADEMARKS OF THEIR RESPECTIVE OWNERS.

