

Topic6(Comparison Operators)

C++ Comparison Operators

- Comparison operators are used to compare two values (or variables). This is important in programming, because it helps us to find answers and make decisions.

The return value of a comparison is either `1` or `0`, which means `true(1)` or `false(0)`. These values are known as **Boolean values**, and you will learn more about them in the Booleans and If...Else Topic's.

In the following example, we use the **greater than** operator (`>`) to find out if 5 is greater than 3:

```
int x = 5;
int y = 3;
cout << (x > y); // returns 1 (true because 5 is greater than 3)
```

A list of all Comparison operators:

| Operator | Name | Example |
|--------------------|--------------------------|------------------------|
| <code>==</code> | Equal to | <code>x == y</code> |
| <code>!=</code> | Not equal | <code>x != y</code> |
| <code>></code> | Greater than | <code>x > y</code> |
| <code><</code> | Less than | <code>x < y</code> |
| <code>>=</code> | Greater than or equal to | <code>x >= y</code> |
| <code><=</code> | Less than or equal to | <code>x <= y</code> |

```
#include<iostream>
#include<string>

using namespace std;

int main(int argc, char const *argv[])
{
    // Boolean variables
    bool TrueValue = true;    // True value(1)
    bool FalseValue = false;  // False value (0)

    // Declaration of variables
    int x = 0, y = 2;

    // Equal to
    cout << "Equal to : " << (x == y) << endl;

    // Not equal
    cout << "Not equal : " << (x != y) << endl;

    // Greater than
    cout << "Greater than : " << (x > y) << endl;

    // Less than
    cout << "Less than : " << (x < y) << endl;

    // Greater than or equal
    cout << "Greater than or equal : " << (x >= y) << endl;

    // Less than or equal
    cout << "Less than or equal : " << (x <= y) << endl;
    return 0;
}
```