

C++ Class Notes – 31082020

- The logical operators are AND (&&) and OR (||).
- They are used to combine two different expressions together.
- If two statement are connected using AND operator, the validity of both statement will be considered, but if they are connected using OR operator, then either one of them must be valid. These operators are mostly used in loops (especially while loop) and in Decision making.
- There are basically 3 types of logical operators such as –
 1. **Logical AND (&&)**
 2. **Logical OR (||)**
 3. **Logical NOT (!)**

/* Example of Logical OR operator */

#include<iostream.h>

#include<conio.h>

void main()

{

int n;

cout<<"Enter the number: ";

cin>>n;

if(n%2 == 0 || n%3 == 0)

{

cout<<"if block executes";

}

else

{

cout<<"else block executes";

}

}

```
/* WAP to show the example of Logical NOT operator */
#include<iostream.h>
#include<conio.h>
```

```
void main()
{
    int n;
    n = 0;

    cout<<"Negation of logical NOT operator: "<<!n;
}
```

- **Unary Operators –**

- These are the operators which work on only one operand.
- There are many unary operators, but increment ++ and decrement -- operator are most used.

- **Increment operator & Decrement Operator -**

- **Prefix** - Change value before action
- **Postfix** – Change value after action

Example -

```
a = 10
a = a + 1 --    ++a    --    a++
a = a + 2 --    a+=2

a = a - 1 --    --a    --    a--
a = a - 2 --    a-=2
```

Example –

```
a = 10
a = a + ++a - a++
= 10 + 11 - 11
= 10
```

```
a = 3, b = 7
p = a + --b - a++ * b
= 3 + 6 - 3 * 6
= 3 + 6 - 18
= -9
```

- **Ternary Operators –**

The ternary if-else `? :` is an operator which has three operands.

Example –

```
int a = 10;  
a > 5 ? cout << "true" : cout << "false"
```

```
#include<iostream.h>  
#include<conio.h>
```

```
void main()  
{  
    int n;  
    cout<<"Enter the number: ";  
    cin>>n;  
  
    (n > 0)? cout<<"greater than 0": cout<<"less than 0";  
}
```
