Question no 1:

Write a c++ program that take two boolian variables a and b as input.use logical operators to check and print if both a and b are true.

```cpp
#include <iostream>
using namespace std;
int main() {
    bool a,b;
    cout<<"Enter a boolian variable = ";
    cin>>a;
    cout<<"Enter a boolian variable = ";
    cin>>b;

    bool condition = (a && b == true);
    cout << boolalpha << condition;
        return 0;
```

```
Enter a boolian variable = 1
Enter a boolian variable = 1
true
--------------------------------
Process exited after 22.19 seconds with return value 0
```

Question no 2:

Write a c++ program that take an integer input x.use logical operators to check if x is greater than 50?

```cpp
#include <iostream>
using namespace std;
int main() {
    int a;
    cout<<"Enter an integer = ";
    cin>>a;

    bool condition = (a>50) ;

    cout << boolalpha << condition;
        return 0;
```

```
Enter an integer = 80
true
--------------------------------
Process exited after 10.96 seconds with return value 0
```

```
Enter an integer = 32
false
--------------------------------
Process exited after 4.379 seconds with return value 0
```

Question no 3:

Write the differences between logical operators (AND,OR,NOT).

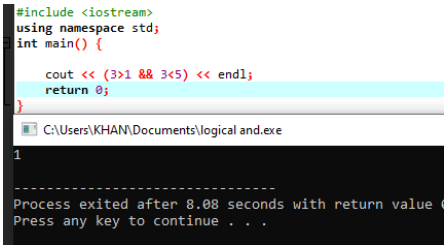
Logical operators: Logical operators are used to control the flow of a program based on conditions or decisions. They allow you to combine multiple conditions to make more complex decisions.

AND operator(&&):

The AND operator returns **true** if both conditions are **true**It is denoted by the symbol **&&**

Syntax : (condition1 && condition2)

Example :



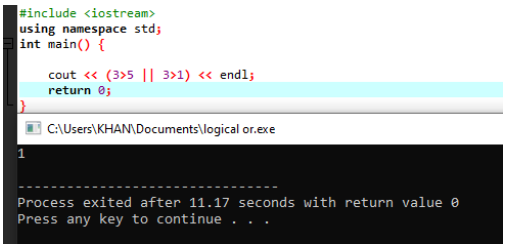
- [ ] The output is '1' i.e true because both of the conditions are true.

OR operator(||):

The OR operator returns **true** if at least one condition is **true**. It is denoted by the symbol **(||)**

Syntax : (condition1 || condition2)

Example :



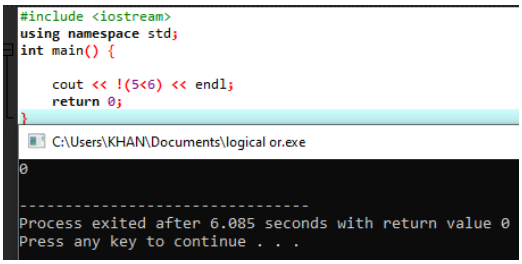
- [ ] The output is '1' i.e true because one of the condition is true.

NOT operator(!):

The NOT operator returns the opposite of the condition. It is denoted by the symbol `!`.

Syntax : !(condition)

Example:



- [ ] The output is '0' i.e false because the not operatorsreturns opposite of the condition

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