CONDITIONAL STRUCTURE : IF and IF-ELSE

The *if* keyword is used to execute a statement or block only if a condition is fulfilled. Its form is:

if (condition) statement

Where *condition* is the expression that is being evaluated. If this condition is true, *statement* is executed. If it is false, *statement* is ignore (not executed) and the program continues right after this conditional structure.

For example:

```
#include <iostream>
using namespace std;

int main ()
{
   // local variable declaration:
   int a = 100;

   // check the boolean condition
   if( a < 20 )
   {
       // if condition is true then print the following
       cout << "a is less than 20;" << endl;
   }
   return 0;
}
```

The *if-else* structure can be concatenated with the intention of verifying a range of value.

For example:

```
#include <iostream>
using namespace std;

int main ()
{
   // local variable declaration:
   int a = 100;

   // check the boolean condition
   if( a < 20 )
   {
       // if condition is true then print the following
       cout << "a is less than 20;" << endl;
   }
   else
   {
       // if condition is false then print the following
       cout << "a is not less than 20;" << endl;
   }
   cout << "value of a is : " << a << endl;
```

```
   return 0;
}
```

If we want more than a single statement to be executed, we must group them in a block by enclosing them in braces ( ).

```
#include <iostream>
using namespace std;

int main ()
{
   // local variable declaration:
   int a = 100;
   int b = 10;

   // check the boolean condition
   if( a < 20 )
   {
       // if condition is true then print the following
       cout << "a is less than 20;" << endl;
       if( b < 20 )
       cout << "b is less than 20;" << endl;
   }
   return 0;
}
```