

# Break statement in C++ with example

The **break statement** is used in following two scenarios:

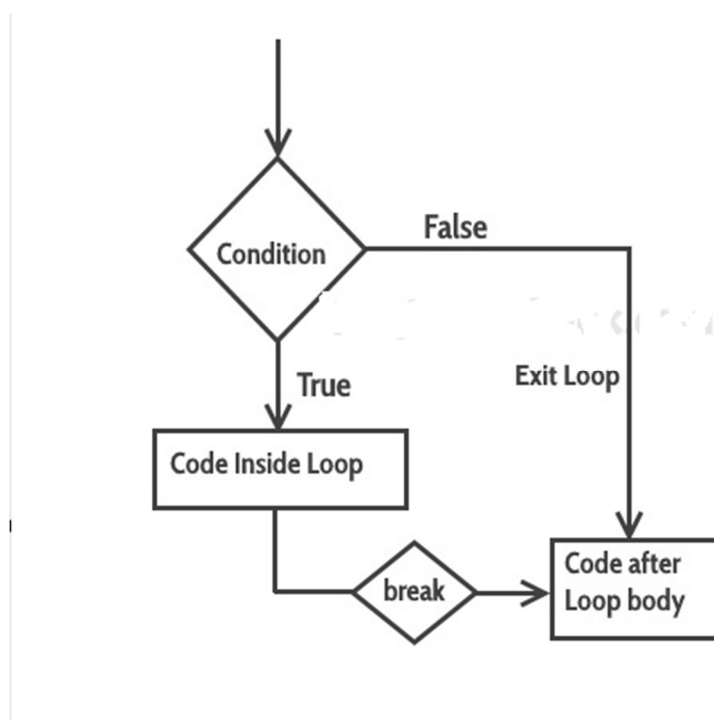
a) Use break statement to come out of the loop instantly. Whenever a break statement is encountered inside a loop, the control directly comes out of loop terminating it. It is used along with if statement, whenever used inside loop(see the example below) so that it occurs only for a particular condition.

b) It is used in switch case control structure after the case blocks. Generally all cases in switch case are followed by a break statement to avoid the subsequent cases (see the example below) execution. Whenever it is encountered in switch-case block, the control comes out of the switch-case body.

## Syntax of break statement

```
break;
```

## break statement flow diagram



## Example – Use of break statement in a while loop

In the example below, we have a while loop running from 10 to 200 but since we have a break statement that gets encountered when the loop counter variable value reaches 12, the loop gets terminated and the control jumps to the next statement in program after the loop body.

```
#include <iostream>
using namespace std;
int main(){
    int num =10;
    while(num<=200) {
        cout<<"Value of num is: "<<num<<endl;
        if (num==12) {
            break;
        }
        num++;
    }
    cout<<"Hey, I'm out of the loop";
    return 0;
}
```

**Output:**

```
Value of num is: 10
Value of num is: 11
Value of num is: 12
Hey, I'm out of the loop
```

## Example: break statement in for loop

```
#include <iostream>
using namespace std;
int main(){
    int var;
    for (var =200; var>=10; var --) {
        cout<<"var: "<<var<<endl;
        if (var==197) {
            break;
        }
    }
    cout<<"Hey, I'm out of the loop";
    return 0;
}
```

**Output:**

```
var: 200
var: 199
var: 198
var: 197
Hey, I'm out of the loop
```

## Example: break statement in Switch Case

```
#include <iostream>
using namespace std;
int main(){
    int num=2;
    switch (num) {
        case 1: cout<<"Case 1 "<<endl;
        break;
        case 2: cout<<"Case 2 "<<endl;
        break;
        case 3: cout<<"Case 3 "<<endl;
        break;
        default: cout<<"Default "<<endl;
    }
    cout<<"Hey, I'm out of the switch case";
    return 0;
}
```

**Output:**

```
Case 2
Hey, I'm out of the switch case
```

In this example, we have break statement after each Case block, this is because if we don't have it then the subsequent case block would also execute. The output of the same program without break would be:

```
Case 2
Case 3
Default
Hey, I'm out of the switch case
```

## goto statement in C++ with example

The goto statement is used for transferring the control of a program to a given label. The syntax of goto statement looks like this:

```
goto label_name;
```

**Program structure:**

```
label1:
...
...
goto label2;
...
..
label2:
...
```

In a program we have any number of goto and label statements, the goto statement is followed by a label name, whenever goto statement is encountered, the control of the program jumps to the label specified in the goto statement.

goto statements are almost never used in any development as they are complex and makes your program much less readable and more error prone. In place of goto, you can use continue and break

## Example of goto statement in C++

```
#include <iostream>
using namespace std;
int main(){
    int num; cout<<"Enter a number: "; cin>>num;
    if (num % 2==0){
        goto print;
    }
    else {
        cout<<"Odd Number";
    }

    print:
    cout<<"Even Number";
    return 0;
}
```

### Output:

```
Enter a number: 42
```