

if-else Statement

This lesson explains if-else statements and how to write them using an example

We'll cover the following ^

- if...else Variations
- Explanation

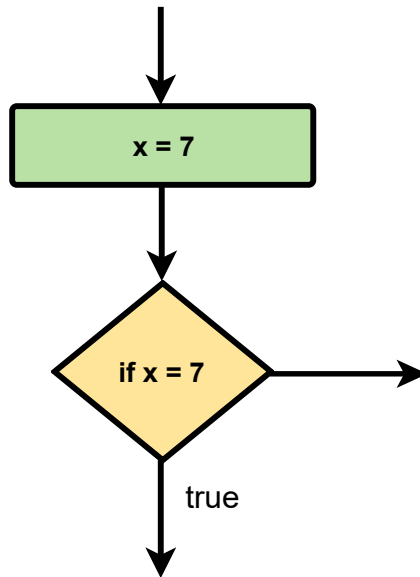
if...else Variations

There are **two** variations to the **if...then** conditional. Let us take a simple case and explain it line-by-line.

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

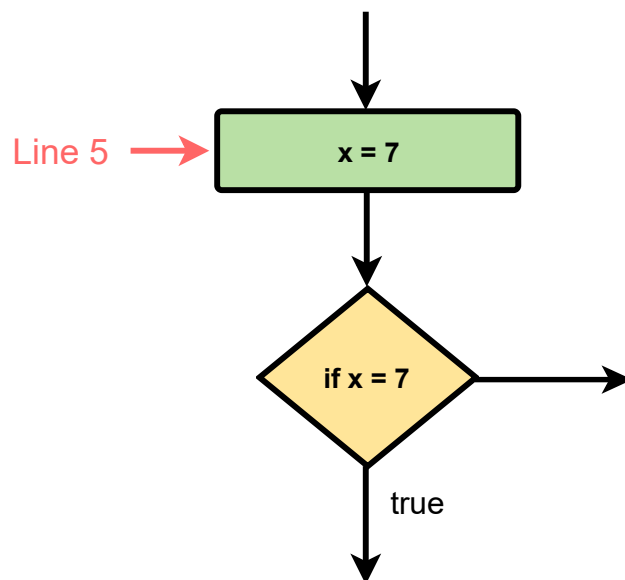
int main() {
    int x = 7; //change this value to see the result for else condition
    if (x == 7) {
        //this code is executed only if x does indeed contain the integer value 7
        cout << "Value of x is 7"<<endl;
    } else {
        //this code is executed if the preceding if condition evaluated to false
        cout << "Value of x is not 7 "<<endl;
    }
    return 0;
}
```





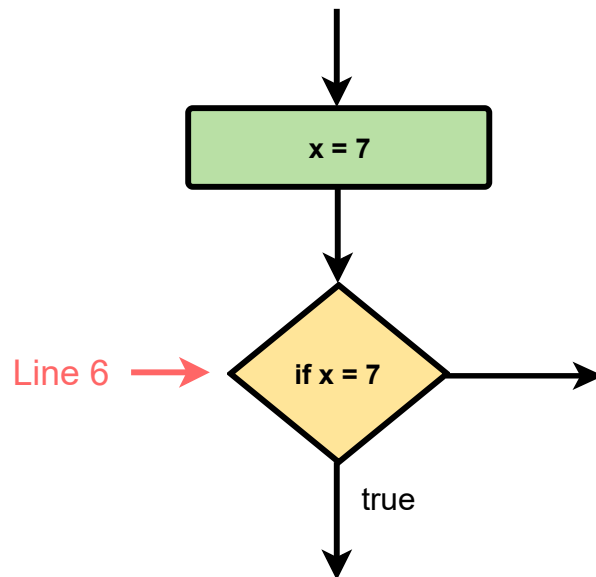
Flowchart of if-else variation

1 of 6



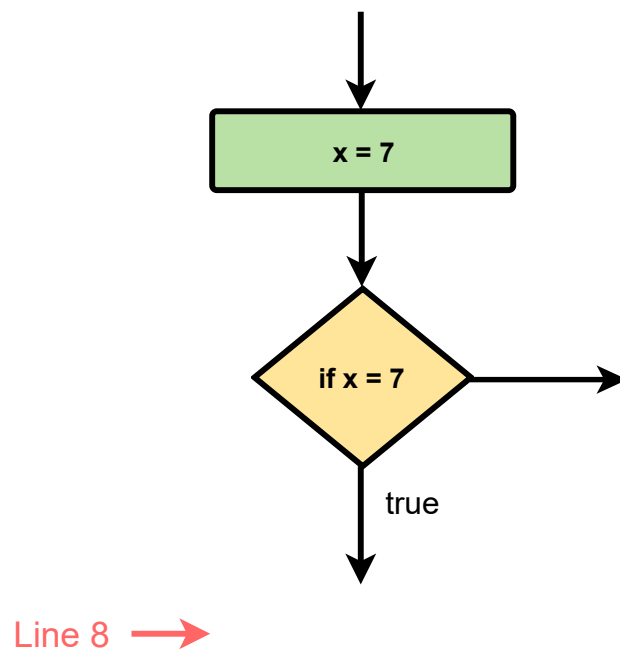
Flowchart of if-else variation

2 of 6



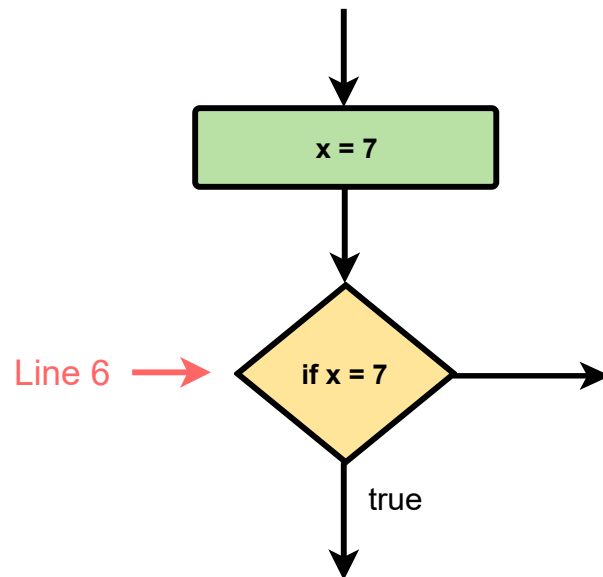
Flowchart of if-else variation

3 of 6



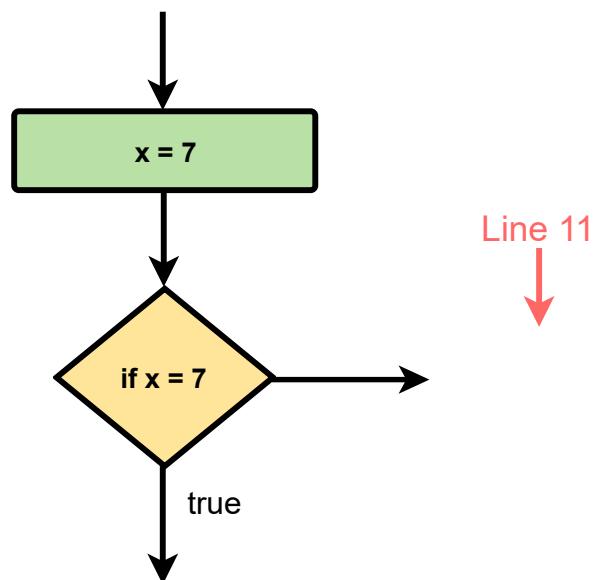
Flowchart of if-else variation

4 of 6



Flowchart of if-else variation

5 of 6



Flowchart of if-else variation

6 of 6

Explanation

Line 6:

- In this line note that there is space between the keyword `if` and the *opening parenthesis*.
- Inside the parentheses is the **condition**; in this case, it is a *test* for **equality**.
- It is a good practice to use the **same** type of *arguments* (not comparing *floating-point* values to *characters*).
- Note also the **left curly brace** `{`. This symbol denotes a block of *multiple* lines of code. Without it, the conditional would only refer to the statement immediately following it.
- It is a good practice to always use the braces.

Line 8:

- This comment represents the *body* of the conditional statement.

Line 9:

- The *right curly brace* is **essential**; it matches the *opening brace* on line 6 and signals the *end* of the `if` body.
- This line is optional. If there is a sort of “**default**” behavior that should be carried out, it would be placed here.
- The `else` clause does not belong by itself, only directly following an `if` clause.

Line 11:

- This is the body of the `else` clause.

Line 12:

- This *curly brace* is also **essential**; it matches the *opening brace* on line 9 and signals the end of the `else` body.

The body of the `else` block can be another `if` statement. This is known as “**nested conditionals**” because the conditionals are indeed nested; that is, placed inside of one another.

Now let's take a look at the `switch` statements in the upcoming lesson.