else-if Statement

In this lesson, you will learn about the else-if statement in C++.

We'll cover the following

Introduction

Suppose you want to buy a present for your friend's birthday. Following are the costs of things you can buy for them:

Wrist-watch: $20

Comic book: $10

Chocolate: $5

Pen: $0

Based on the available money, we have multiple choices to buy a present. How can we translate this example into a C++ program?

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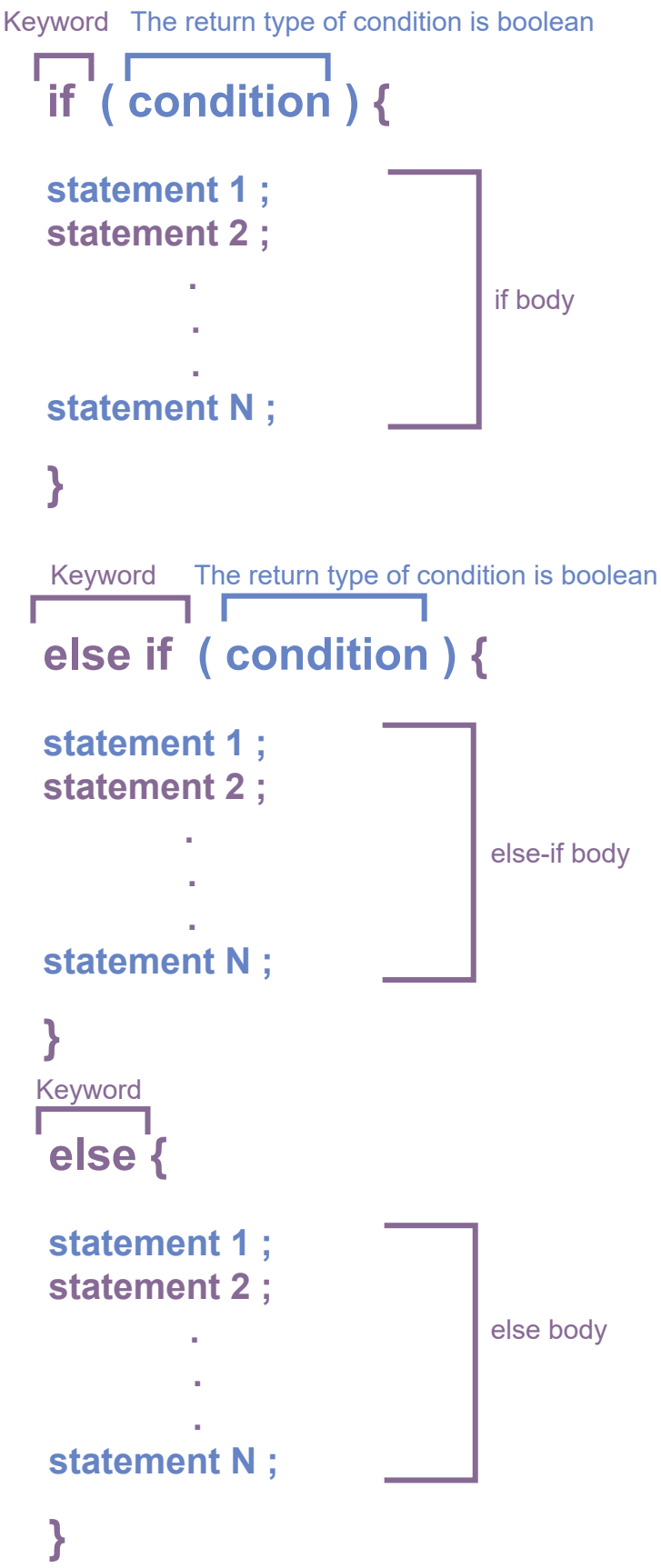
*In C++, we can use the **else-if** statement to check multiple conditions in a program.*

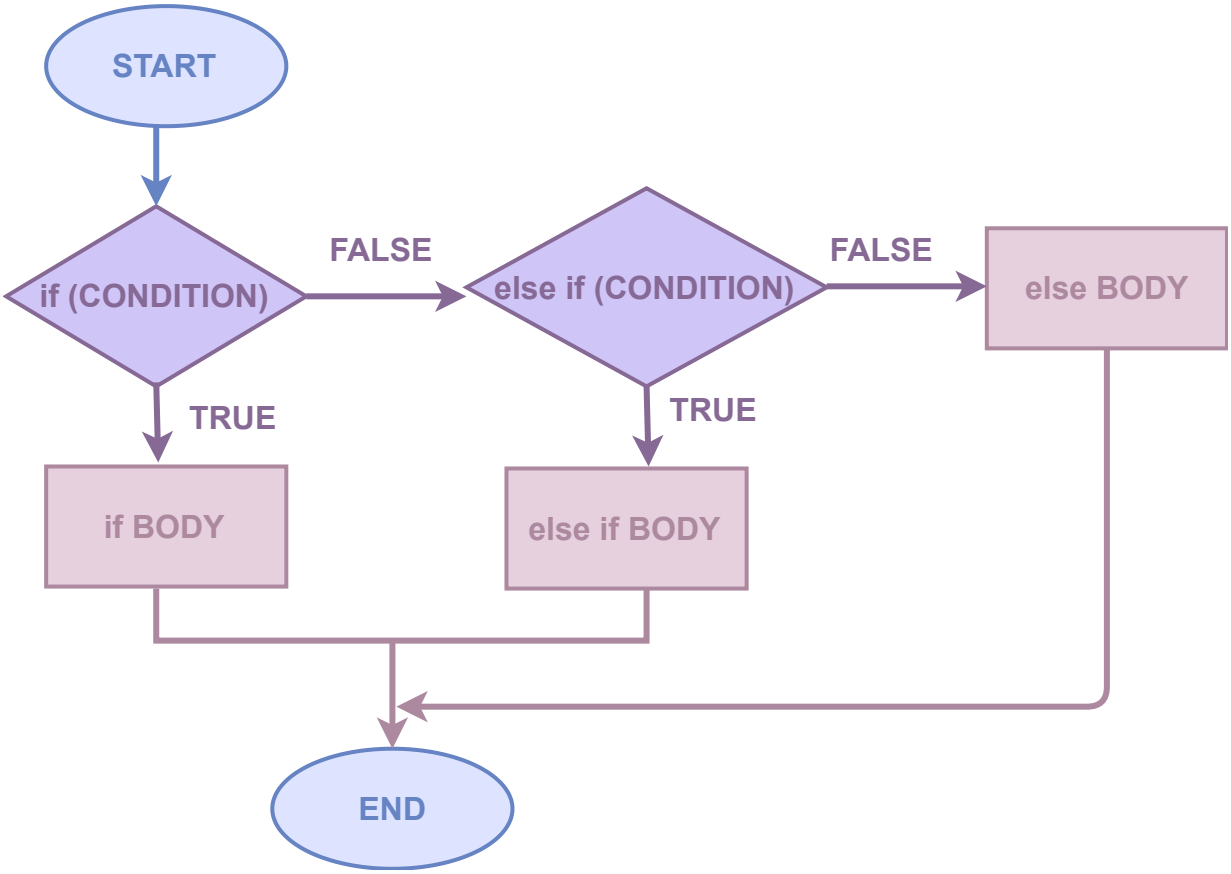
Syntax

The basic syntax for the `else-if` statement is given below:



Flowchart

The flow chart given below explains the working of the `else-if` statement:



In the figure above:

- The compiler checks the condition in the `if` statement.
- If the condition returns `1`, the compiler executes the `if` block.
- If the condition evaluates to false, the compiler checks the condition in the `else-if` statement.
- If the condition in the `else-if` statement returns `1`, the compiler executes the `else-if` block.
- If it also evaluates to `false`, the compiler executes the `else` block.

Example program

Let's convert the example given above into a C++ program.

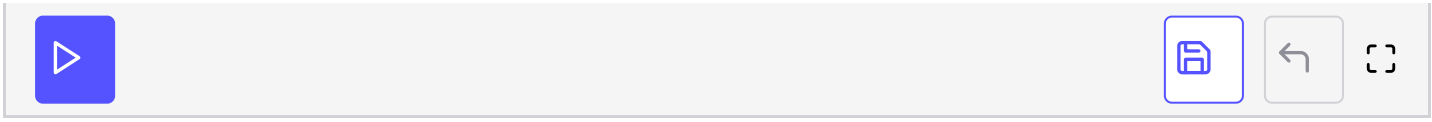
Run the code below and see how the `else-if` statement works!

```
#include <iostream>

using namespace std;

int main() {
```

```
  // Initialize variable money
  int money = 6;
  // if block
  if (money >= 20) {
    cout << "You can gift a watch" << endl;
  }
  // else-if block
  else if (money >= 10) {
    cout << "You can gift a comic book " << endl;
  }
  else if (money >= 5) {
    cout << "You can gift a chocolate " << endl;
  }
  // else block
  else {
    cout << "You can gift a pen " << endl;
  }
  return 0;
}
```



Line No. 7: Sets the value of `money` to `6`.

Line No. 9: Checks if the value of `money` is greater than or equal to `20`. The value of `money` is less than `20`; therefore, the condition in the `if` statement returns `0`.

Line No. 10: Prints `You can gift a watch` in the output if the condition in **Line No. 9** evaluates to true

Line No. 13: Checks if the value of `money` is greater than or equal to `10`. The value of money is less than 10; therefore, a condition in the `else-if` statement returns `0`.

Line No. 14: Prints `You can gift a comic book` in the output if the condition in **Line No. 13** evaluates to true

Line No. 16: Checks if the value of `money` is greater than or equal to `5`. The value of money is greater than 5; therefore, a condition in the `else-if` statement returns `1`

Line No. 17: Prints `You can gift a chocolate` in output if the condition in **Line No. 16** evaluates to true.

Line No. 20 If all the above conditions evaluate to false, `else` block is executed.

Line No. 21: Prints `You can gift a pen` to the console if all the other conditions evaluate to `false`

evaluate to `false`

If `number = 85`, then what is the output of the following code?

```
int number;

if (number > 85) {
  cout << "Hey! I am greater than 85" << endl;
} else if (number == 85) {
  cout << "Hey! I am equal to 85" << endl;
} else {
  cout << "Hey! I am less than 85" << endl;
}
cout << "number = " << number;
```

Retake Quiz

Let’s discuss the `switch` statement in the upcoming lesson.

See you there!