

## C++ Comments

Comments in C++ are meant to explain the code as well as to make it more readable. When testing alternative code, it can also be used to prevent execution. The purpose of the comments is to provide information about code lines. Programmers commonly use comments to document their work.

### Why Comments are used in C++?

Comments in C++ are used to summarize an algorithm, identify a variable's purpose, or clarify a code segment that appears unclear. Comments are also used for:

- Comments are used for easier debugging.
- It makes a program more readable and gives an overall description of the code.
- Comments are helpful in skipping the execution of some parts of the code.
- Every time a program or code is reused after long periods of time, the comment recaps all the information of the code quickly.

### Types of Comments in C++

In C++ there are two types of comments :

- Single-line comment
- Multi-line comment

## Comments

//

Single line comment

/\*

Multi-line comment

\*/



### 1. Single Line Comment

In C++ Single line comments are represented as `//` double forward slash. It applies comments to a single line only. The compiler ignores any text after `//` and it will not be executed.

#### Syntax:

```
// Single line comment
```

#### Example:

- C++

```
// C++ Program to demonstrate single line comment
#include <iostream>
using namespace std;

int main()
{
    // Single line comment which will be ignored by the
    // compiler
    cout << "GFG!";
    return 0;
}
```

#### Output

GFG!

## 2. Multi-Line Comment

A multi-line comment can occupy many lines of code, it starts with `/*` and ends with `*/`, but it cannot be nested. Any text between `/*` and `*/` will be ignored by the compiler.

#### Syntax:

```
/*
    Multiline Comment
    .
    .
    .
*/
```

#### Example:

- C++

```
// C++ Program to demonstrate Multi line comment
#include <iostream>
using namespace std;

int main()
{
    /* Multi line comment which
       will be ignored by the compiler
    */
}
```

```
*/  
cout << "GFG!";  
return 0;  
}
```

## Output

GFG!

**Tip:** Some IDEs provide shortcut to apply comments as well, such as:

- **Shortcut for single line:** The shortcut to make a single line into a comment is 'ctrl + /'.
- **Shortcut for multi-line:** To make a multiline comment, we can select all the lines we want to comment out and then use the same shortcut ('ctrl + /').

## How does the compiler process C++ Comments?

As a part of the compiler, the [Lexical Analyzer](#) scans the characters and transforms them into tokens with no passing of the commented text to the parser. Since Comments do not contribute to the functionality of the program they are simply omitted at the time of compilation. Accordingly, we can understand that comments are just text in programs that are ignored by the compiler.