Hello World

New Line

The escape sequence `\n` (backward slash and the letter n) generates a new line in a text string.

```
std::cout << "Hello\n";
std::cout << "Hello again\n";
```

Program Structure

The program runs line by line, from top to bottom:

- The first line instructs the compiler to locate the file that contains a library called `iostream`. This library contains code that allows for input and output.
- The `main()` function houses all the instructions for the program.

```
#include <iostream>

int main() {

  std::cout << "1\n";
  std::cout << "2\n";
  std::cout << "3\n";

}
```

Basic Output

`std::cout` is the "character output stream" and it is used to write to the standard output. It is followed by the symbols `<<` and the value to be displayed.

```
std::cout << "Hello World!\n";
```

Compile Command

Using GNU, the compilation command is `g++` followed by the file name. Here, the name of the source file is **hello.cpp**.

```
g++ hello.cpp
```

```
g++ hello.cpp -o hello  # specifies name of objec
```

Execute Command

The execution command is `./` followed by the file name. Here, the name of the executable file is **a.out**.

```
./a.out
```

Single-line Comments

Single-line comments are created using two consecutive forward slashes. The compiler ignores any text after `//` on the same line.

```
// This line will denote a comment in C++
```

Multi-line Comments

Multi-line comments are created using `/*` to begin the comment, and `*/` to end the comment. The compiler ignores any text in between.

```
/*
This is all commented out.
None of it is going to run!
*/
```

Code -> Save -> Compile -> Execute

The g++ compiler takes the source code and compile it into object code (aka. executable, machine c