

Lesson 1 Student Workbook

What Is C plus plus

Today you will write, compile, and run your first C++ program. You do not need to understand every detail yet. Your goal is to learn the basic shape of a C++ program and prove that you can make a simple change.

Key Words

Word	Meaning
Program	A set of instructions a computer can run.
Source code	Code written by a programmer.
Compiler	A tool that translates C++ source code into a runnable program.
Run	Start the program and see what it does.
Syntax	The exact rules for writing code correctly.

The Edit Compile Run Cycle

1. Edit the source code.
2. Save the file.
3. Compile the code.
4. Run the program.
5. Read the result or fix errors.

Your First C plus plus Program

```
#include <iostream>

using namespace std;

int main() {
    cout << "Hello, world!" << endl;
    return 0;
}
```

What Each Part Does

Code Part	What To Know Today
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<code>#include <iostream></code>	Adds tools for printing text.
<code>using namespace std;</code>	Lets us write cout instead of a longer name.
<code>int main()</code>	The starting point of the program.
<code>{ and }</code>	Braces group the code inside main.
<code>cout</code>	Prints text to the terminal.
<code>;</code>	Ends many C++ statements.
<code>// comment</code>	A note for humans. The compiler ignores it.

Try It

6. Create a file named main.cpp.
7. Type the starter program exactly.
8. Compile it with `g++ main.cpp -o hello.exe`.
9. Run it with `.\hello.exe`.
10. Write the output you see below.

Output: _____

Make It Yours

Change the cout line so the program prints your name.

```
cout << "Hello, my name is ____!" << endl;
```

Then add two more cout lines so your program prints three lines total.

Comments

A comment is a note in the code for people. It starts with two slashes.

```
// This program prints a message.
```

Add one comment above main that explains what your program does.

Reflection

What did you change in the program?

What happened when you compiled and ran it?
