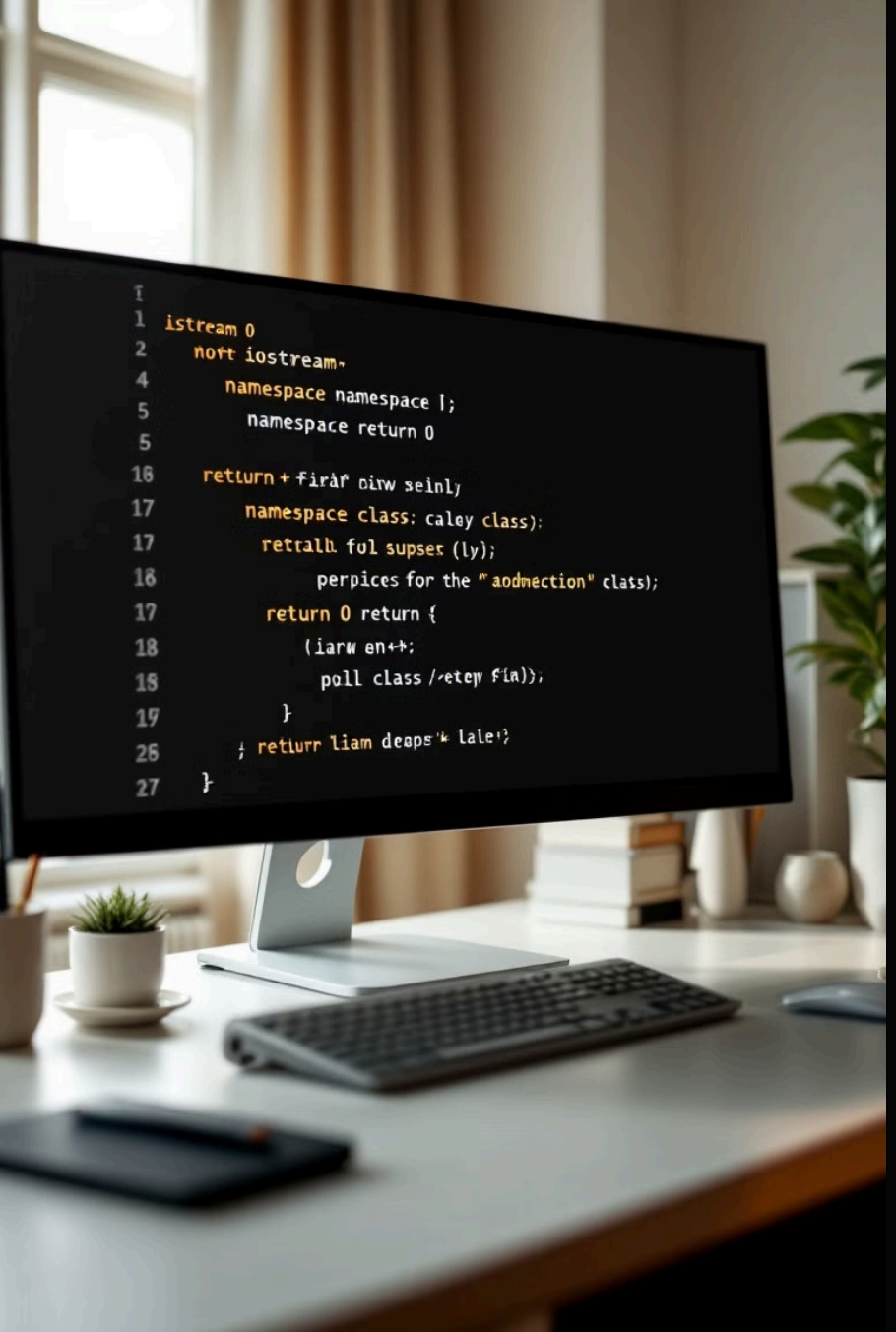


Programming Fundamentals: C++

Welcome to Programming Fundamentals! This presentation covers the history of C++, basic program structure, and essential elements like directives and comments. We'll also explore output methods and manipulators. Let's begin our journey into the world of C++.

The History of C++

C++ evolved from "C with Classes" in 1983. Bjarne Stroustrup sought efficiency and flexibility. The language added object-oriented features. It had its first ISO standard in 1998. C++ continues to evolve with new standards.

1. 1979
   C with Classes
2. 1983
   Becomes C++
3. 1998
   C++98 Standard
4. 2011 Onward
   Modern Updates

Compilers vs. Interpreters

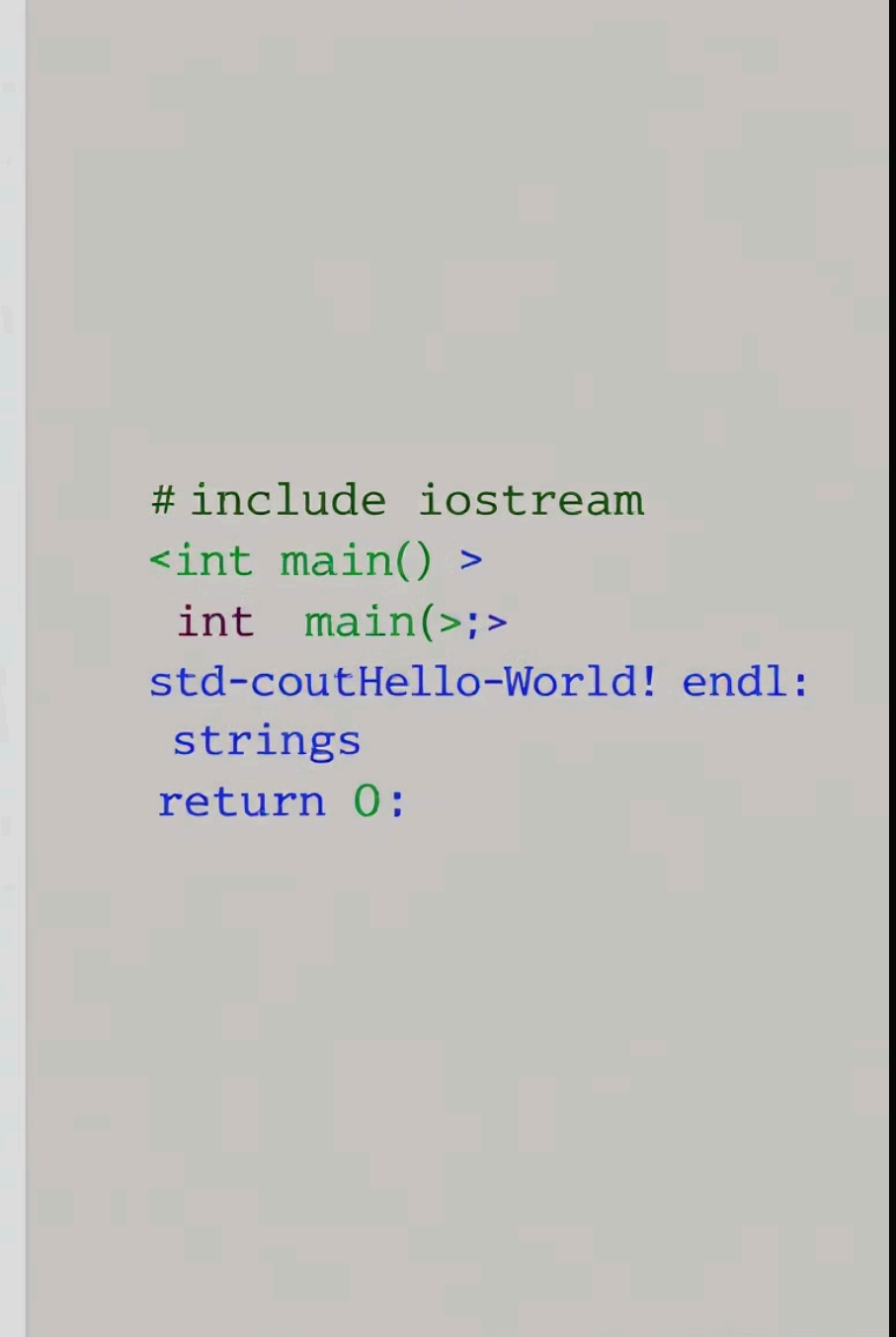
C++ employs compilers to translate code into machine code before execution. This leads to faster execution speeds. Interpreters translate and execute code line by line. C++ is typically a compiled language.

Compilers

- Translates the entire code at once
- Faster execution
- Examples: g++, Clang

Interpreters

- Translates line by line
- Easier debugging



Basic C++ Program Structure

Let's explore the structure of a simple C++ program. This structure includes directives, comments, output using "cout", escape sequences, setw, endl, and manipulators. Understanding this structure is crucial for writing C++ code.

```
#include <iostream>

int main() {
  // This is a comment
  std::cout << "Hello, World!" << std::endl;
  return 0;
}
```