# Why C++?

C++ is one of the most popular programming languages available today. Originally called C with Classes, the language was renamed to C++ in 1983. It's an extension of the original C language, and is a general purpose object-oriented (OOP) environment.

## C EVERYTHING

**Due to both the complexity of the language and its power and performance, C++ is often used to develop games, programs, device drivers, and even entire operating systems.**

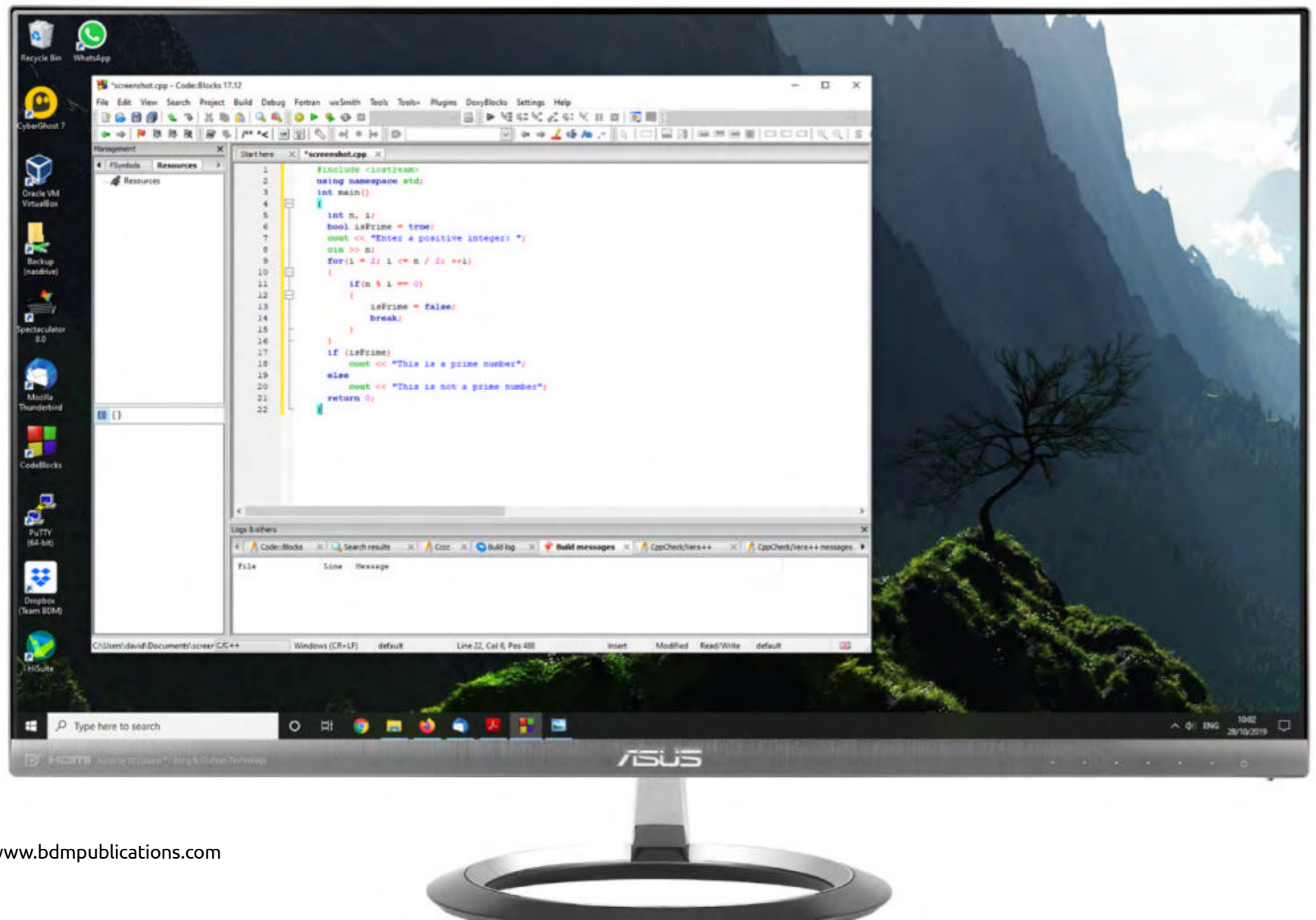
Dating back to 1979, the start of the golden era of home computing, C++, or rather C with Classes, was the brainchild of Danish computer scientist Bjarne Stroustrup, while working on his Ph.D thesis. Stroustrup's plan was to further the original C language, which had been widely used since the early seventies.

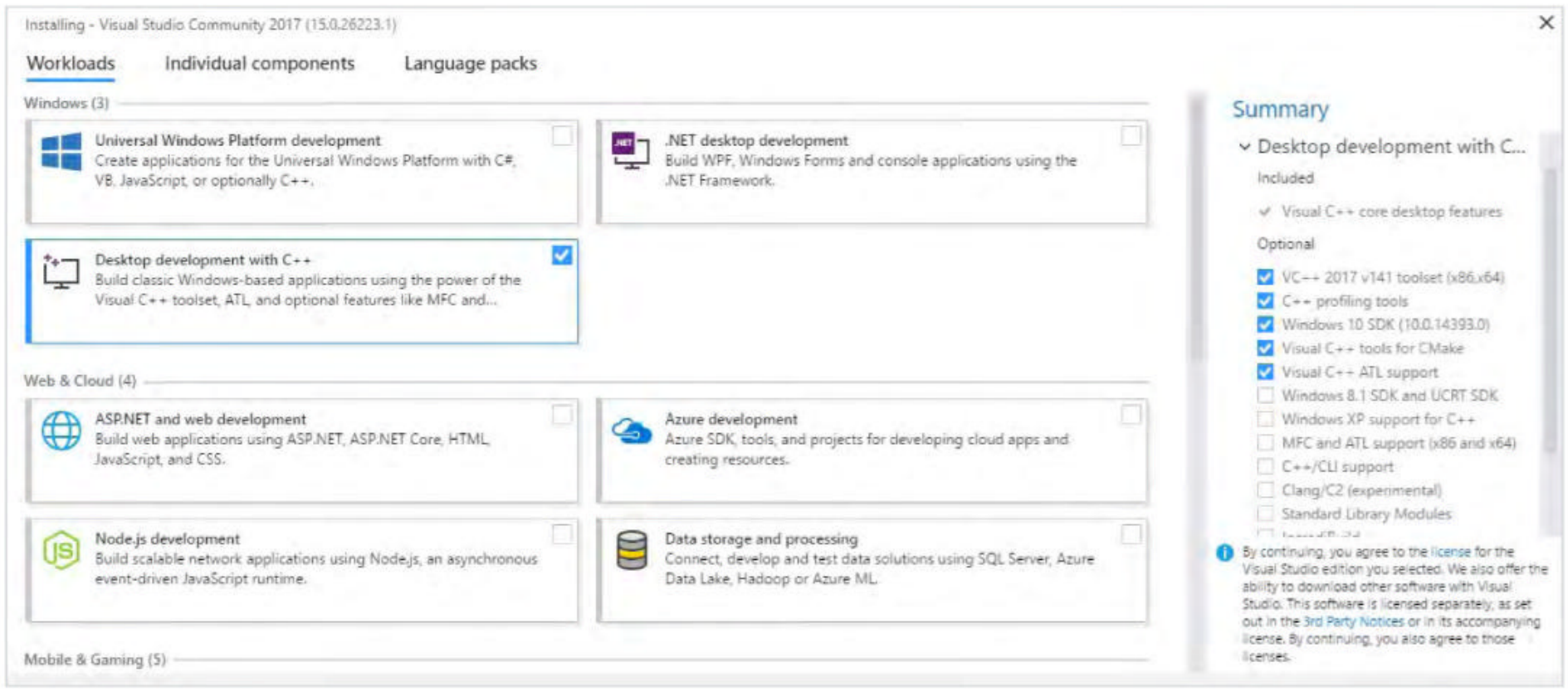
C++ proved to be popular among the developers of the 80s, since it was a much easier environment with which to get to grips, and, more importantly, it was 99% compatible with the original C language. This meant that, beyond the mainstream computing labs, regular people who didn't have access to the mainframes and large computing data centres could use it.

C++'s impact in the digital world is immense. Many of the programs, applications, games, and even operating systems are coded using C++. For example, all of Adobe's major applications, such as Photoshop, InDesign and so on, are developed in C++. You will find that the browser you use to surf the Internet is written in C++, as well as Windows 10, Microsoft Office, and the backbone to Google's search engine. Apple's macOS is written largely in C++ (with some other languages mixed in depending on the function), and the likes of NASA, SpaceX, and even CERN use C++ for various applications, programs, controls, and umpteen other computing tasks.

As well as being an easier addition to the core C language, C++ is also extremely efficient and performs well across the board. This higher level of performance over other languages, such as Python, BASIC and such, makes it an ideal development environment for modern computing; hence the aforementioned companies using it so widely.

**C++ code is much faster than other programming languages.**






**Microsoft's Visual Studio is a great, free environment in which to learn C++.**

C++ puts the developer in a much wider world of coding. By mastering C++, you will find yourself being able to develop code for the likes of Microsoft, Apple and so on. Generally, C++ developers enjoy a higher salary than programmers of some other languages, and, due to its versatility, the C++ programmer can move between jobs and companies without the need to re-learn anything specific.

You will discover, as you become a more advanced coder, that many of the developers in various coding jobs around the world tend to use pre-designed development engines. For example, when creating games, the likes of Bethesda, the team behind Oblivion and Skyrim, utilise a 3D game engine called The Creation Engine. This enables the team to quickly create animations, characters, items, terrains, rooms, and just about everything else you'd see in the game. The engine itself has been modified to make the most of the current graphics card hardware, and computer or console processing power. These engines are mostly written in C++, and when making improvements to the engine, or when creating a new game, if the developers want to add something that the engine can't do, they will use C++ to create the new content or link between two different engines. The end result, of course, is a game that contains the latest graphical technology, while being seamlessly bound together with some pretty clever C++ coding.

Getting to use C++ is quite easy, all you need is the right set of tools in which to communicate with the computer in C++, and you can start your journey. A C++ IDE is free of charge, even the immensely powerful Visual Studio from Microsoft is freely available to download and use. You can get into C++ from any operating system, be it macOS, Linux, Windows, or even mobile platforms.

So, to answer the question of Why C++, the answer is because it's fast, efficient, and developed by most of the applications you regularly use. It's cutting edge, and a fantastic language to have mastered.

**Indeed, the operating system you're using is written in C++.**