What is C++ Programming?

C++ is an enhanced C language typically used for object oriented programming. It traces its origins back well over thirty years. Although it’s far from the oldest computer language, it’s one of the older ones that is in common usage today – so you might say it gets an A for its ability to adapt to changing technological times.



C++ was developed by Bjarne Stroustrup, who did the first development work as part of his PhD project. During the early years, he called the language “C with Classes”. He had begun developing a new language because he felt that no existing language was ideal for large scale projects. Later, when he was working at AT&T Bell Labs, he again felt limited. He dusted off his “C with Classes” and added features of other languages. Simula had a strong influence; AlLGOL 68 played a role. Ultimately, a lot more than classes got added: virtual functions, templates, and operator overloading.

***C++has influenced later languages like PHP, Java, and (not surprisingly) C# (C-Sharp).***

C++ has grown far beyond a one man operation. The name actually came from another developer, Rick Mascitti. It was partly a play on the name of the “++” operator and partly a reference to the enhancement; two pluses may have been a bit of a joke.

The language was first standardized in 1998. Standards were again issued in 2003, 2007, and 2011. C++ is maintained by the ISO, a large standards committee. The current version is C++11. According to Stroustrup, the biggest improvement is in abstraction mechanisms. Among the other goals of the most recent revision: to make C++ a better language for embedded systems and to better support novices.

Development has been guided by certain ideals. C++ strives to be portable; there is an attempt to avoid reliance on features that are platform-dependent.

***Goals of the most recent revision include: to make C++ a better language for embedded systems and to better support novices.***

The standard, of course, isn’t all there is; there are libraries that exist outside it.

Use of C++

C++ is widely used in embedded systems software engineering. It’s also popular in communications and gaming. It is used in many other industries: health care, finances, and even defense.

Facebook has posted ads that cite C++ among the desired skills. Other recent postings for those versed in C++ come from Verizon Wireless, WSFS Bank, and Lord & Taylor.

One reason that programmers opt for C++ is that it interfaces well with other languages. Another plus is that it is high performance.

The process of mining existing languages to create new ones has of course been ongoing. C++has influenced later languages like PHP, Java, and (not surprisingly) C# (C-Sharp).

C++ Sites

Although C++ isn’t owned in the way that some other computer languages are, there are still authority sites. You can get information about official standards at Open Standards.

You may also visit the founder’s site. His homepage includes links to libraries, articles, and resources as well as tid bits about the development process. Stroustrup even has his own style and technique FAQ. There are questions about classes, templates, exceptions, and other language features.

Learning C++

There are other places you can turn to study C++. MakeUseof recently recommended three sites. LearnCPlusPlus is touted as a good beginner’s tutorial. CProgramming offers an accessible tutorial with quizzes and practice questions. It’s written in a friendly style and opens with the basics like setting up a compiler. You’ll also find common beginner’s mistakes. If you like the style, you can get a book by the author.

Cplusplus.com offers a well-organized tutorial, but one that may require more background knowledge. You can visit the site for forums and reference materials.

C++ founder Struts up stresses that even his own site isn’t a substitute for a textbook. C++ may be easier to learn than C (depending on who you ask), but there’s a lot to it. Stroustrup’s own book is The C++ Programming Language. It’s designed for programmers, and may not be ideal for a novice. Additional book recommendations can be found on Stroutsup’s site.

What Does a Computer Programmer Do?

A [computer programmer](https://www.thebalancecareers.com/quiz-should-i-become-a-computer-programmer-4083253) creates the code for software applications and operating systems. After a software developer designs a computer program, the programmer writes code that converts that design into a set of instructions a computer can follow. They test the program to look for errors and then rewrite it until it is error-free. The programmer continues to evaluate programs that are in use, making updates and adjustments as needed.

## Roles and Responsibilities

Are you wondering what a [computer programmer does at work](https://www.thebalancecareers.com/computer-programmer-job-description-salary-and-skills-2061823)? These typical job duties appeared in online advertisements for computer programmer positions found on [Indeed.com](https://www.indeed.com/):

* "Develop, test, and implement computer programs on multiple computer/operating system platforms."
* "Help develop a new web-based information system (IS)"
* "Perform all activities necessary for the definition, design, construction, testing, and implementation of automated computer systems."
* "Review programs on a frequent basis and make adjustments as are necessary to ensure proper working of the program."
* "Confirm program operation by conducting tests; modifying program sequence and/or codes."
* "Create and publish technical diagrams to support coding efforts."
* "Integrate new functionality into existing applications."

#### **Advantages of being a computer programmer**

**Computer programming is high job satisfaction  , You can use your creativity & mind , You can develop your own software product , There is no career limit for talented and hard working programmers and you can determine your destiny .**

[**Computer programming**](https://www.online-sciences.com/programming/programming-languages-types-features-advantages-and-disadvantages/)**is well paying job , As a computer programmer , You can have multiple career options , The computer programming can prepare you for the careers in the other related technology , Many**[**computer programmers**](https://www.online-sciences.com/programming/programming-languages-types-features-advantages-and-disadvantages/)**can work under an assortment of titles , such as the system analyst , Web programmer & the application programmer , According to the indeed website .**

**Pay is the biggest benefit of working as a computer programmer ,**[**The computer programmers**](https://www.online-sciences.com/programming/programming-languages-types-features-advantages-and-disadvantages/)**who write computer code which enables**[**the computer**](https://www.online-sciences.com/computer/computers-in-business-uses-advantages-and-disadvantages/)**to perform certain tasks , work in every industry such as the**[**engineering**](https://www.online-sciences.com/computer/computer-engineers-computer-engineering-importance-applications/)**,**[**educational**](https://www.online-sciences.com/technology/the-importance-of-using-laptops-in-education/)**&**[**medical fields**](https://www.online-sciences.com/computer/computers-in-medicine-uses-advantages-and-disadvantages/)**.**

[**Computer programming**](https://www.online-sciences.com/programming/programming-languages-types-features-advantages-and-disadvantages/)**does not need lease office space or chain yourself to an etched-in-stone work schedule , Computer programming can be performed from anywhere , you can carry the laptop computer , You can access to**[**the Internet**](https://www.online-sciences.com/technology/what-are-the-advantages-and-disadvantages-of-using-the-internet/)**&  you can complete the jobs from home .**

**The computer programmer does not need to embark on a four-year college degree path to be a profession , Some computer programming training programs can be completed in just six months , Ask IT Career Coach reports that entry requirements for computer programming are low , Motivated individuals have taught themselves the skills &**[**computer languages**](https://www.online-sciences.com/computer/programming-languages-types-features-advantages-and-disadvantages/)**needed to land a job as a computer programmer .**

**Job security is a superb benefit enjoyed by most computer programmers ,**[**The computer**](https://www.online-sciences.com/computer/computers-importance-in-the-military-aerospace/)**technology advances at a fast rate , keeping the demand for computer programmers at a high level , as long as the society relies on computing technology , there will be a demand for the computer programmers .**

##### **Disadvantages of being a programmer**

[**Computer programming**](https://www.online-sciences.com/programming/programming-in-java-advantages-and-disadvantages/) **is fast paced , As a programmer , you have to learn new information quickly and competently , You should have hardcore reading , Read many books each year just to keep up with new technologies or new computer upgrade .**

[**Computer programming**](https://www.online-sciences.com/programming/programming-in-java-advantages-and-disadvantages/)**is technology driven , If you are not passionate about technology at heart , you may become unhappy over the influence it exerts on your values ,**[**Computer programming**](https://www.online-sciences.com/programming/programming-in-java-advantages-and-disadvantages/)**causes health problems , You spend a lot of time sitting , typing in front of the computer , your wrist , eyes & back may cause some pain or injures .**

**The programmer sits in the chair while looking at a bright screen for long hours & working to finish the project , There are many**[**health risks**](https://www.online-sciences.com/health/harmful-health-effects-of-the-computer-on-the-human-body/)**on the body & mind , The programmers work indoors in front of the computer for the vast majority of their workday .**

**You’ll find yourself sitting in a chair , tapping keys & clicking a mouse button for many hours straight , which can lead to musculoskeletal pain & disorders as well as eyestrain  , Most programmers work for long hours and they can work roughly 40 hours per week .**

**The programmer has the ability & desire to learn new**[**languages**](https://www.online-sciences.com/computer/programming-languages-types-features-advantages-and-disadvantages/)**, pick up & apply new concepts and adjust to new tools , He may see this need for adaptability exciting , but when he don’t like sudden and constant change , He won’t enjoy this particular facet of being a programmer .**