Brian Engel

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Reflection

There are many benefits of using C++ as a programming language. It is fast, uses object-oriented programming, and allows pointers to memory locations. It also has been around for a long time and has a huge community so getting questions answered is fairly easy. A few of the disadvantages of using C++ are that there is a lot of boilerplate and there is a lot of syntax as well, making it harder to debug. Advantages of Visual Studio are that it can include some of the boilerplate, uses different colors for different parts of the code, and helps show syntax errors.

There are also many benefits of using Python as a programming language. The biggest advantage I can see is that it is very simple and easy to learn without all the syntax and boilerplate that comes with C++. Python hasn’t been around nearly as long as C++, but already has a large community, and is fairly easy to get questions answered. The main disadvantages of Python are that it is slow and uses a lot of memory and is not good for mobile app development. PyCharm has pretty much the same advantages as any other IDE, being able to autofill some of the code, uses different colors for different parts of the code, and helps show syntax errors.

There are different programming languages because people write them as they are needed. As technology advances, the ability of an existing language to be able to code for it might not exist so a new language is needed. Knowing multiple languages allows you to be able to use the most efficient language for the task at hand.