

It is very difficult to determine what are the most popular modern programming languages. However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. Unreadable code often leads to bugs, inefficiencies, and duplicated code. Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years. Computer programmers are those who write computer software. Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code. Many applications use a mix of several languages in their construction and use. For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software. Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly. Ideally, the programming language best suited for the task at hand will be selected. There are many approaches to the Software development process. Whatever the approach to development may be, the final program must satisfy some fundamental properties. Use of a static code analysis tool can help detect some possible problems. New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation). Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code. Programmable devices have existed for centuries. Ideally, the programming language best suited for the task at hand will be selected. There exist a lot of different approaches for each of those tasks. Unreadable code often leads to bugs, inefficiencies, and duplicated code. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.