

However, readability is more than just programming style. One approach popular for requirements analysis is Use Case analysis. Computer programmers are those who write computer software. FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research. It affects the aspects of quality above, including portability, usability and most importantly maintainability. The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems. Many applications use a mix of several languages in their construction and use. 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. Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line. Many applications use a mix of several languages in their construction and use. These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics. Integrated development environments (IDEs) aim to integrate all such help. 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). Use of a static code analysis tool can help detect some possible problems. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. It is very difficult to determine what are the most popular modern programming languages. It is usually easier to code in "high-level" languages than in "low-level" ones. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.