

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. Whatever the approach to development may be, the final program must satisfy some fundamental properties. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Programming languages are essential for software development. Scripting and breakpointing is also part of this process. Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code. Their jobs usually involve: Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Use of a static code analysis tool can help detect some possible problems. One approach popular for requirements analysis is Use Case analysis. 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. Use of a static code analysis tool can help detect some possible problems. It affects the aspects of quality above, including portability, usability and most importantly maintainability. The following properties are among the most important: In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. Some of these factors include: The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills. There are many approaches to the Software development process. Integrated development environments (IDEs) aim to integrate all such help. Programs were mostly entered using punched cards or paper tape. Their jobs usually involve: Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash. Techniques like Code refactoring can enhance readability. It is very difficult to determine what are the most popular modern programming languages. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.