

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 involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. 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. It is usually easier to code in "high-level" languages than in "low-level" ones. 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. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. However, readability is more than just programming style. Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit. 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. Different programming languages support different styles of programming (called programming paradigms). Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit. It is usually easier to code in "high-level" languages than in "low-level" ones. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages. 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. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. Use of a static code analysis tool can help detect some possible problems. There exist a lot of different approaches for each of those tasks. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. 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. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.