

The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. 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. The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine. Following a consistent programming style often helps readability. One approach popular for requirements analysis is Use Case analysis. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. 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. However, Charles Babbage had already written his first program for the Analytical Engine in 1837. Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute. One approach popular for requirements analysis is Use Case analysis. While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se. Following a consistent programming style often helps readability. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Techniques like Code refactoring can enhance readability. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. Allen Downey, in his book *How To Think Like A Computer Scientist*, writes: Many computer languages provide a mechanism to call functions provided by shared libraries. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. Computer programmers are those who write computer software. Programmable devices have existed for centuries. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. Following a consistent programming style often helps readability. In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in *A Manuscript on Deciphering Cryptographic Messages*. 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.