

The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. It is very difficult to determine what are the most popular modern programming languages. 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. It affects the aspects of quality above, including portability, usability and most importantly maintainability. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists. 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. 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. Also, specific user environment and usage history can make it difficult to reproduce the problem. It is usually easier to code in "high-level" languages than in "low-level" ones. Following a consistent programming style often helps readability. Scripting and breakpointing is also part of this process. Normally the first step in debugging is to attempt to reproduce the problem. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. Programmable devices have existed for centuries. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). 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. Programmable devices have existed for centuries. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.