

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. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. Unreadable code often leads to bugs, inefficiencies, and duplicated code. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL). Following a consistent programming style often helps readability. 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. 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. 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. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Also, specific user environment and usage history can make it difficult to reproduce the problem. Programmable devices have existed for centuries. Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. Different programming languages support different styles of programming (called programming paradigms). 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.