

It is very difficult to determine what are the most popular modern programming languages. 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. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. 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. 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. Unreadable code often leads to bugs, inefficiencies, and duplicated code. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code. There exist a lot of different approaches for each of those tasks. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems. 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. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. Computer programmers are those who write computer software. However, Charles Babbage had already written his first program for the Analytical Engine in 1837. 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. Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line. There exist a lot of different approaches for each of those tasks. 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. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.