In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. 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. 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. 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. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. One approach popular for requirements analysis is Use Case analysis. Programs were mostly entered using punched cards or paper tape. Use of a static code analysis tool can help detect some possible problems. 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. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. 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. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash. 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. For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software. 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. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Their jobs usually involve: Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language. 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 text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. 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. It is very difficult to determine what are the most popular modern programming languages.