

This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. 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. Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). Some of these factors include: The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills. 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. It is usually easier to code in "high-level" languages than in "low-level" ones. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. Following a consistent programming style often helps readability. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. 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. 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. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Scripting and breakpointing is also part of this process. 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. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. Code-breaking algorithms have also existed for centuries. 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. Also, specific user environment and usage history can make it difficult to reproduce the problem. Many applications use a mix of several languages in their construction and use. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. 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. Scripting and breakpointing is also part of this process. 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.