

Many applications use a mix of several languages in their construction and use. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. 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. 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. Many applications use a mix of several languages in their construction and use. It is usually easier to code in "high-level" languages than in "low-level" ones. Code-breaking algorithms have also existed for centuries. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. Techniques like Code refactoring can enhance readability. Also, specific user environment and usage history can make it difficult to reproduce the problem. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Techniques like Code refactoring can enhance readability. Ideally, the programming language best suited for the task at hand will be selected. 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 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. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. 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. Computer programmers are those who write computer software. In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). Scripting and breakpointing is also part of this process. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. 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 is usually easier to code in "high-level" languages than in "low-level" ones.