He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. 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. Programmable devices have existed for centuries. 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. However, readability is more than just programming style. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. 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. Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. 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. However, readability is more than just programming style. It is very difficult to determine what are the most popular modern programming languages. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. 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. 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. In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages. For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. 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. 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.