This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Different programming languages support different styles of programming (called programming paradigms). Many applications use a mix of several languages in their construction and use. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. It is usually easier to code in "high-level" languages than in "low-level" ones. 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 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. 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. Computer programmers are those who write computer software. 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. 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, 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. Whatever the approach to development may be, the final program must satisfy some fundamental properties. Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL). In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. Different programming languages support different styles of programming (called programming paradigms). It is very difficult to determine what are the most popular modern programming languages. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. They are the building blocks for all software, from the simplest applications to the most sophisticated 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. Whatever the approach to development may be, the final program must satisfy some fundamental properties. Ideally, the programming language best suited for the task at hand will be selected.