A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). However, Charles Babbage had already written his first program for the Analytical Engine in 1837. It is usually easier to code in "high-level" languages than in "low-level" ones. It is very difficult to determine what are the most popular modern programming languages. Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit. 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. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation). The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). Also, specific user environment and usage history can make it difficult to reproduce the problem. 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. Whatever the approach to development may be, the final program must satisfy some fundamental properties. 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. Ideally, the programming language best suited for the task at hand will be selected. Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. Many applications use a mix of several languages in their construction and use. 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. Programming languages are essential for software development. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. 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. 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. 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. Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.