The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. 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. 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. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Scripting and breakpointing is also part of this process. 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. Many applications use a mix of several languages in their construction and use. Many applications use a mix of several languages in their construction and use. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Computer programmers are those who write computer software. Programmable devices have existed for centuries. Computer programmers are those who write computer software. 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). 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. 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. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. It is usually easier to code in "high-level" languages than in "low-level" ones. The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. 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. 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.