

Use of a static code analysis tool can help detect some possible problems. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. 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. However, Charles Babbage had already written his first program for the Analytical Engine in 1837. Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language. Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). 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. 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. 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. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. There are many approaches to the Software development process. 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. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams. Unreadable code often leads to bugs, inefficiencies, and duplicated code. 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. 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. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. Programs were mostly entered using punched cards or paper tape. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. Integrated development environments (IDEs) aim to integrate all such help. 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.