After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. 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. 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. Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses. Unreadable code often leads to bugs, inefficiencies, and duplicated code. 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. Some of these factors include: The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. Integrated development environments (IDEs) aim to integrate all such help. Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. However, readability is more than just programming style. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. 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. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). Ideally, the programming language best suited for the task at hand will be selected. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. 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. 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. As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices. Use of a static code analysis tool can help detect some possible problems. Different programming languages support different styles of programming (called programming paradigms). There exist a lot of different approaches for each of those tasks. 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. 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.