Different programming languages support different styles of programming (called programming paradigms). By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. Programs were mostly entered using punched cards or paper tape. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash. Normally the first step in debugging is to attempt to reproduce the problem. The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems. 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. There exist a lot of different approaches for each of those tasks. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. 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. For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software. These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics. Normally the first step in debugging is to attempt to reproduce the problem. 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). 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 is very difficult to determine what are the most popular modern programming languages. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. 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. Programming languages are essential for software development. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. Programmable devices have existed for centuries.