Whatever the approach to development may be, the final program must satisfy some fundamental properties..  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
 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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
 Programmable devices have existed for centuries.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
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.  
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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
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.