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..  
Use of a static code analysis tool can help detect some possible problems.  
 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.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
Programming languages are essential for software development.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.