In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
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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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
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 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
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.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.