The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine..  
 Computer programmers are those who write computer software.  
 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.  
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.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
There exist a lot of different approaches for each of those tasks.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
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.