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..  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
 It is very difficult to determine what are the most popular modern programming languages.  
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.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 Programmable devices have existed for centuries.  
 Code-breaking algorithms have also existed for centuries.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
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.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.