Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries..  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
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.  
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.  
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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Different programming languages support different styles of programming (called programming paradigms).  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
 It is very difficult to determine what are the most popular modern programming languages.  
 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.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Ideally, the programming language best suited for the task at hand will be selected.  
Many applications use a mix of several languages in their construction and use.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.