Programmable devices have existed for centuries..  
 Different programming languages support different styles of programming (called programming paradigms).  
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.  
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.  
Use of a static code analysis tool can help detect some possible problems.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
 Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 Code-breaking algorithms have also existed for centuries.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
 It is very difficult to determine what are the most popular modern programming languages.  
 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.  
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.