After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug..  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 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.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 Different programming languages support different styles of programming (called programming paradigms).  
 It is very difficult to determine what are the most popular modern programming languages.  
 Code-breaking algorithms have also existed for centuries.  
 These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics.  
While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.