This can be a non-trivial task, for example as with parallel processes or some unusual software bugs..  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
Scripting and breakpointing is also part of this process.  
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 the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
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.  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
 Computer programmers are those who write computer software.  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
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.