Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
There are many approaches to the Software development process.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
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).