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..  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
One approach popular for requirements analysis is Use Case analysis.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
Scripting and breakpointing is also part of this process.  
 It is very difficult to determine what are the most popular modern programming languages.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
There are many approaches to the Software development process.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
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.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
 Following a consistent programming style often helps readability.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.