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.  
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.  
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.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
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.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Use of a static code analysis tool can help detect some possible problems.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
  
 Computer programming is the process of performing particular computations (or more generally, accomplishing specific computing results), usually by designing and building executable computer programs.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
 Tasks accompanying and related to programming include testing, debugging, source code maintenance, implementation of build systems, and management of derived artifacts, such as the machine code of computer programs.