After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug..  
Use of a static code analysis tool can help detect some possible problems.  
 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.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
 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.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
 Programs were mostly entered using punched cards or paper tape.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 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.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
 Different programming languages support different styles of programming (called programming paradigms).