After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug..  
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.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
 It is very difficult to determine what are the most popular modern programming languages.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
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.  
Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Use of a static code analysis tool can help detect some possible problems.  
Scripting and breakpointing is also part of this process.  
 Code-breaking algorithms have also existed for centuries.