As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices..  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
There are many approaches to the Software development process.  
Programming languages are essential for software development.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Scripting and breakpointing is also part of this process.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 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).  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 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.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
 Following a consistent programming style often helps readability.  
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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.