Integrated development environments (IDEs) aim to integrate all such help.  
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.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
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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.  
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.  
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.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
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.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
 Different programming languages support different styles of programming (called programming paradigms).  
 Following a consistent programming style often helps readability.