Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
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Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
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.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
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.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
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.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Scripting and breakpointing is also part of this process.