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..  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
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.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
Scripting and breakpointing is also part of this process.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 Programmable devices have existed for centuries.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 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.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
One approach popular for requirements analysis is Use Case analysis.