High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware..  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
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.  
Scripting and breakpointing is also part of this process.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
 Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
One approach popular for requirements analysis is Use Case analysis.  
 Computer programmers are those who write computer software.  
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.