Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages..  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
Use of a static code analysis tool can help detect some possible problems.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
Integrated development environments (IDEs) aim to integrate all such help.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
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.  
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.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
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.