Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL)..  
Many applications use a mix of several languages in their construction and use.  
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.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
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.  
 These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
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.  
Normally the first step in debugging is to attempt to reproduce the problem.  
One approach popular for requirements analysis is Use Case analysis.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
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.