Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages..  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Code-breaking algorithms have also existed for centuries.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Integrated development environments (IDEs) aim to integrate all such help.  
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).  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
One approach popular for requirements analysis is Use Case analysis.  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
 Programs were mostly entered using punched cards or paper tape.  
 Following a consistent programming style often helps readability.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.