It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages..  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 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.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 Computer programmers are those who write computer software.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Use of a static code analysis tool can help detect some possible problems.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
Programming languages are essential for software development.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
One approach popular for requirements analysis is Use Case analysis.  
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.