He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Techniques like Code refactoring can enhance readability.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
Programming languages are essential for software development.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
 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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.