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 Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
However, readability is more than just programming style.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
Techniques like Code refactoring can enhance readability.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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).  
However, while these might be considered part of the programming process, often the term software development is more likely used for this larger overall process – whereas the terms programming, implementation, and coding tend to be focused on the actual writing of code.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
 Code-breaking algorithms have also existed for centuries.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.