In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 Programs were mostly entered using punched cards or paper tape.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.