By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers..  
 Computer programmers are those who write computer software.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
There exist a lot of different approaches for each of those tasks.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 Code-breaking algorithms have also existed for centuries.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Some of these factors include:  
 The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
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.