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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Programmable devices have existed for centuries.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
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.  
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.  
Scripting and breakpointing is also part of this process.  
Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
  
 Programs were mostly entered using punched cards or paper tape.  
One approach popular for requirements analysis is Use Case analysis.