Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process..  
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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
Ideally, the programming language best suited for the task at hand will be selected.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
One approach popular for requirements analysis is Use Case analysis.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 It is very difficult to determine what are the most popular modern programming languages.  
Integrated development environments (IDEs) aim to integrate all such help.  
The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Many applications use a mix of several languages in their construction and use.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.