Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA)..  
 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.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
Programming languages are essential for software development.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
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.  
Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers.  
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.  
There are many approaches to the Software development process.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
It is usually easier to code in "high-level" languages than in "low-level" ones.