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..  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
One approach popular for requirements analysis is Use Case analysis.  
  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 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.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
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.  
 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.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).