One approach popular for requirements analysis is Use Case analysis..  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
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.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Many applications use a mix of several languages in their construction and use.  
  
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.  
 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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
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.