Whatever the approach to development may be, the final program must satisfy some fundamental properties..  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
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.  
Many applications use a mix of several languages in their construction and use.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
 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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 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.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.