By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers..  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
There exist a lot of different approaches for each of those tasks.  
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.  
 Programmable devices have existed for centuries.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
Use of a static code analysis tool can help detect some possible problems.  
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.  
However, readability is more than just programming style.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 Programs were mostly entered using punched cards or paper tape.  
Techniques like Code refactoring can enhance readability.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.