Normally the first step in debugging is to attempt to reproduce the problem..  
Ideally, the programming language best suited for the task at hand will be selected.  
  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
There exist a lot of different approaches for each of those tasks.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
Integrated development environments (IDEs) aim to integrate all such help.  
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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
There are many approaches to the Software development process.  
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.  
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.