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..  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
  
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.  
 Different programming languages support different styles of programming (called programming paradigms).  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
There are many approaches to the Software development process.  
Ideally, the programming language best suited for the task at hand will be selected.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
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.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
However, readability is more than just programming style.  
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.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.