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 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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 It is very difficult to determine what are the most popular modern programming languages.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
 Computer programmers are those who write computer software.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
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.  
Use of a static code analysis tool can help detect some possible problems.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
One approach popular for requirements analysis is Use Case analysis.  
While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers.