There exist a lot of different approaches for each of those tasks.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
This is interpreted into machine code.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
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.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
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.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
Techniques like Code refactoring can enhance readability.  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.