To produce machine code, the source code must either be compiled or transpiled.  
This is interpreted into machine code.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
Techniques like Code refactoring can enhance readability.  
Ideally, the programming language best suited for the task at hand will be selected.  
This is interpreted into machine code.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
There exist a lot of different approaches for each of those tasks.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
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.  
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.