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..  
There exist a lot of different approaches for each of those tasks.  
 Code-breaking algorithms have also existed for centuries.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
 Different programming languages support different styles of programming (called programming paradigms).  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
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.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.