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..  
 Computer programmers are those who write computer software.  
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.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
There exist a lot of different approaches for each of those tasks.  
 Following a consistent programming style often helps readability.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 Different programming languages support different styles of programming (called programming paradigms).  
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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 It is very difficult to determine what are the most popular modern programming languages.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
There are many approaches to the Software development process.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.