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.  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
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.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
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.  
Programming languages are essential for software development.  
One approach popular for requirements analysis is Use Case analysis.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
This is interpreted into machine code.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.