This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
Programming languages are essential for software development.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
Scripting and breakpointing is also part of this process.  
Techniques like Code refactoring can enhance readability.  
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.  
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.  
 Programs were mostly entered using punched cards or paper tape.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
Many applications use a mix of several languages in their construction and use.