This can be a non-trivial task, for example as with parallel processes or some unusual software bugs..  
Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit.  
Normally the first step in debugging is to attempt to reproduce the problem.  
There are many approaches to the Software development process.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
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.  
Use of a static code analysis tool can help detect some possible problems.  
 Programs were mostly entered using punched cards or paper tape.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
 Different programming languages support different styles of programming (called programming paradigms).