This can be a non-trivial task, for example as with parallel processes or some unusual software bugs..  
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.  
 It is very difficult to determine what are the most popular modern programming languages.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 Following a consistent programming style often helps readability.  
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.  
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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.