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..  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Use of a static code analysis tool can help detect some possible problems.  
Integrated development environments (IDEs) aim to integrate all such help.  
 Code-breaking algorithms have also existed for centuries.  
 Different programming languages support different styles of programming (called programming paradigms).  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
Scripting and breakpointing is also part of this process.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.