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..  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
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.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 Different programming languages support different styles of programming (called programming paradigms).  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
Techniques like Code refactoring can enhance readability.