Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users..  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
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.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.