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.  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
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.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
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.  
 Following a consistent programming style often helps readability.  
 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.  
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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Computer programmers are those who write computer software.  
Many applications use a mix of several languages in their construction and use.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
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.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.