Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications..  
 It is very difficult to determine what are the most popular modern programming languages.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
Ideally, the programming language best suited for the task at hand will be selected.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Many applications use a mix of several languages in their construction and use.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
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).  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
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.  
  
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.