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..  
One approach popular for requirements analysis is Use Case analysis.  
Techniques like Code refactoring can enhance readability.  
  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
 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.  
 Programmable devices have existed for centuries.  
 It is very difficult to determine what are the most popular modern programming languages.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
There exist a lot of different approaches for each of those tasks.  
Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
There are many approaches to the Software development process.