Integrated development environments (IDEs) aim to integrate all such help..  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
Ideally, the programming language best suited for the task at hand will be selected.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
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.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
 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.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
One approach popular for requirements analysis is Use Case analysis.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Programming languages are essential for software development.  
There are many approaches to the Software development process.