For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash..  
 Programmable devices have existed for centuries.  
One approach popular for requirements analysis is Use Case analysis.  
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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
Use of a static code analysis tool can help detect some possible problems.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Ideally, the programming language best suited for the task at hand will be selected.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.