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..  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
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.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
 Computer programmers are those who write computer software.  
 Code-breaking algorithms have also existed for centuries.  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
Scripting and breakpointing is also part of this process.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
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.  
 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.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
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.