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..  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
 It is very difficult to determine what are the most popular modern programming languages.  
Scripting and breakpointing is also part of this process.  
Use of a static code analysis tool can help detect some possible problems.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Normally the first step in debugging is to attempt to reproduce the problem.  
There exist a lot of different approaches for each of those tasks.  
Integrated development environments (IDEs) aim to integrate all such help.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
Techniques like Code refactoring can enhance readability.