He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
Scripting and breakpointing is also part of this process.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
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.  
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.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 Code-breaking algorithms have also existed for centuries.  
 Tasks accompanying and related to programming include testing, debugging, source code maintenance, implementation of build systems, and management of derived artifacts, such as the machine code of computer programs.