He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Many applications use a mix of several languages in their construction and use.  
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.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
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.  
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.  
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.  
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 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
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.