Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
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.  
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.  
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Use of a static code analysis tool can help detect some possible problems.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
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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.  
 Different programming languages support different styles of programming (called programming paradigms).