

These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. It is usually easier to code in "high-level" languages than in "low-level" ones. The following properties are among the most important: In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. 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. 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. There are many approaches to the Software development process. However, readability is more than just programming style. Techniques like Code refactoring can enhance readability. New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation). Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. 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. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. 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. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in *A Manuscript on Deciphering Cryptographic Messages*. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.