

Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). Techniques like Code refactoring can enhance readability. Also, specific user environment and usage history can make it difficult to reproduce the problem. 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. However, readability is more than just programming style. Some of these factors include: The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. It affects the aspects of quality above, including portability, usability and most importantly maintainability. 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. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. However, readability is more than just programming style. Ideally, the programming language best suited for the task at hand will be selected. Ideally, the programming language best suited for the task at hand will be selected. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. Techniques like Code refactoring can enhance readability. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. It is usually easier to code in "high-level" languages than in "low-level" ones. Integrated development environments (IDEs) aim to integrate all such help. Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Computer programmers are those who write computer software.