

Whatever the approach to development may be, the final program must satisfy some fundamental properties. Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display. Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. Ideally, the programming language best suited for the task at hand will be selected. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Techniques like Code refactoring can enhance readability. Also, specific user environment and usage history can make it difficult to reproduce the problem. While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. 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. Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. Whatever the approach to development may be, the final program must satisfy some fundamental properties. There are many approaches to the Software development process. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Whatever the approach to development may be, the final program must satisfy some fundamental properties. There exist a lot of different approaches for each of those tasks. However, Charles Babbage had already written his first program for the Analytical Engine in 1837. 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. Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display. Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. Integrated development environments (IDEs) aim to integrate all such help. 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.