Unreadable code often leads to bugs, inefficiencies, and duplicated code. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" - a series of pasteboard cards with holes punched in them. One approach popular for requirements analysis is Use Case analysis. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. One approach popular for requirements analysis is Use Case analysis. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. Normally the first step in debugging is to attempt to reproduce the problem. There are many approaches to the Software development process. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference. 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. The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference. One approach popular for requirements analysis is Use Case analysis. Techniques like Code refactoring can enhance readability. Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL). Programming languages are essential for software development. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. Their jobs usually involve: Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. Computer programmers are those who write computer software. Computer programmers are those who write computer software. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.