The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
To produce machine code, the source code must either be compiled or transpiled.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
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.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Integrated development environments (IDEs) aim to integrate all such help.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 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.