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.  
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).  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
Scripting and breakpointing is also part of this process.  
Ideally, the programming language best suited for the task at hand will be selected.  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers.  
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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
Scripting and breakpointing is also part of this process.  
Ideally, the programming language best suited for the task at hand will be selected.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.