They are the building blocks for all software, from the simplest applications to the most sophisticated ones..  
Ideally, the programming language best suited for the task at hand will be selected.  
 Programmable devices have existed for centuries.  
 It is very difficult to determine what are the most popular modern programming languages.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
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.  
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.  
Scripting and breakpointing is also part of this process.  
 Code-breaking algorithms have also existed for centuries.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
Many applications use a mix of several languages in their construction and use.  
Techniques like Code refactoring can enhance readability.