One approach popular for requirements analysis is Use Case analysis..  
Programming languages are essential for software development.  
Ideally, the programming language best suited for the task at hand will be selected.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 Computer programmers are those who write computer software.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
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.  
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.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
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.  
 Programs were mostly entered using punched cards or paper tape.