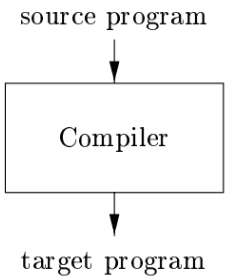
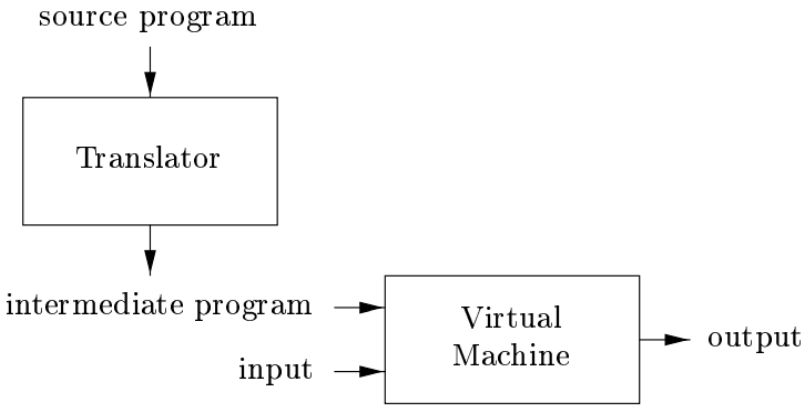
Compiler Design Techniques

A compiler is a program that can read a program in one language (Source language) and translate it into an equivalent program in another language (Target language).



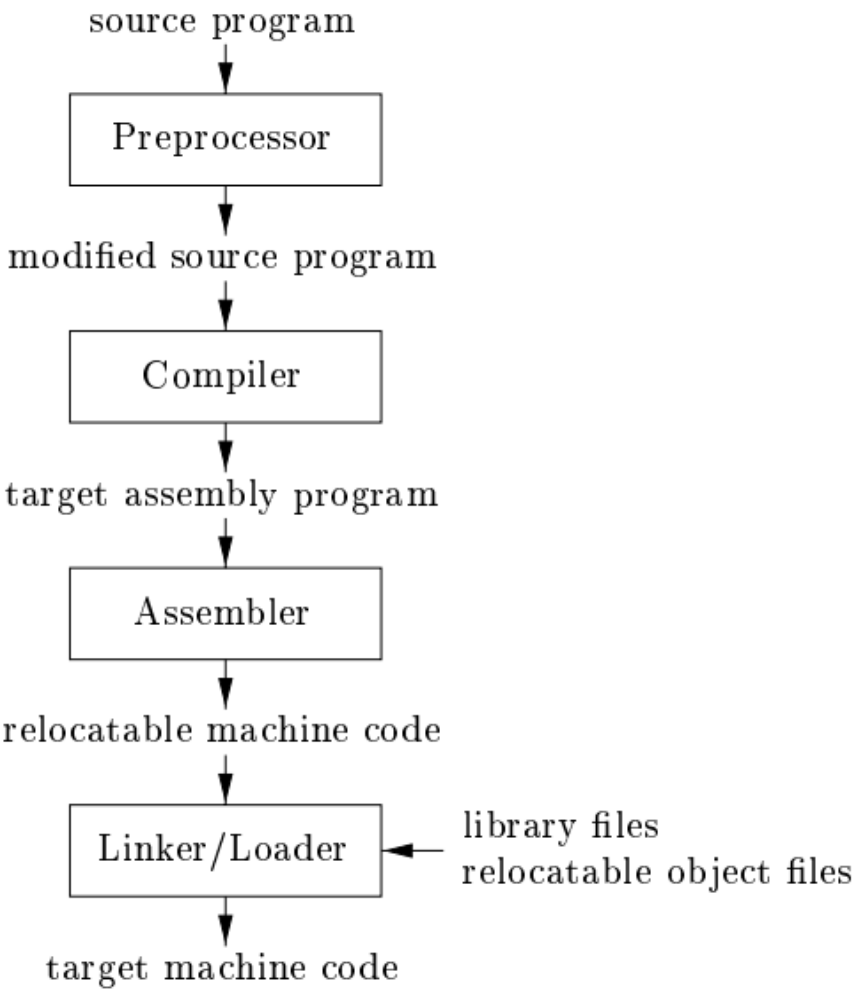
- A compiler is a translator that converts the high-level language into the machine language.
- High-level language is written by a developer and machine language can be understood by the processor.
- Compiler is used to show errors to the programmer.
- The main purpose of compiler is to change the code written in one language without changing the meaning of the program.
- When you execute a program which is written in HLL programming language then it executes into two parts.
- In the first part, the source program compiled and translated into the object program (low level language).
- In the second part, object program translated into the target program through the assembler.



A hybrid Compiler

For example, a java language processor uses both compilation and interpretation. First the source code is translated into intermediate code and then the output along with input is used to generate output. This kind of compiler is called as hybrid compiler.

The processing of language is done using some steps i.e. preprocessor, compiler, assembler and linker or loader.



First, the source program is given as input in preprocessor; the output of preprocessor is modified source code that is further goes to compiler where target assembly code is generated. This goes to assembler to generate relocatable machine code and finally this machine code is used for generating target machine code using Linker or Loader.