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INFORMATION TECHNOLOGY FOR CLASS 12

(Study materials based on N.C.E.R.T)

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INTRODUCTION TO COMPUTERS, PROGRAMS AND JAVA

JAVA FEATURES

- ❖ Inventers of Java programming language wanted to design a language which could offer solutions to some of the problems encountered in modern programming.
- ❖ They wanted the language to be not only reliable, portable and distributed but also simple, compact and interactive.
- ❖ Sun Microsystems officially describes Java with the following features:
 1. **Compiled and interpreted:** - A computer language is either interpreted or compiled. Java combines both these approaches thus making Java a two- stage system as given below:

Stage 1: Java compiler translates source code is known as byte code instructions. Byte code are not machine instructions.

Stage 2: Java interpreter generates machine code that can be directly executed by the machine that is running the Java program.
- ❖ You can say that Java is both a compiled and an interpreted language..
- ❖ Java source code (.Java file) is compiled to byte codes (.class file) that are interpreted by a Java virtual machines (JVM). This provides portability to any machine for which a virtual machine has been written.
- ❖ In Java the two steps/stages of compilation and interpretation allow for extensive code checking and improved security.

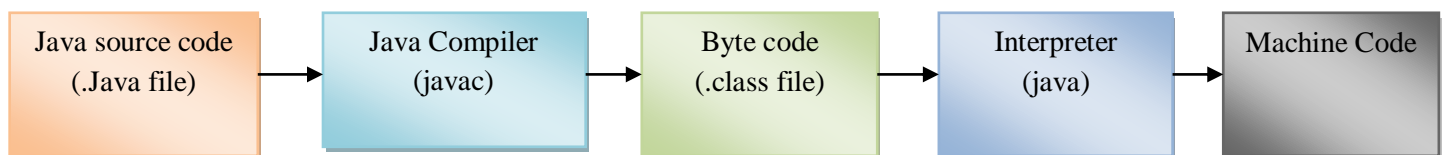


Figure: - How to change source code to machine code