JDK

* The JDK is a software development environment which is used to develop java applications and applets. It physically exists. It contains JRE + Development tools

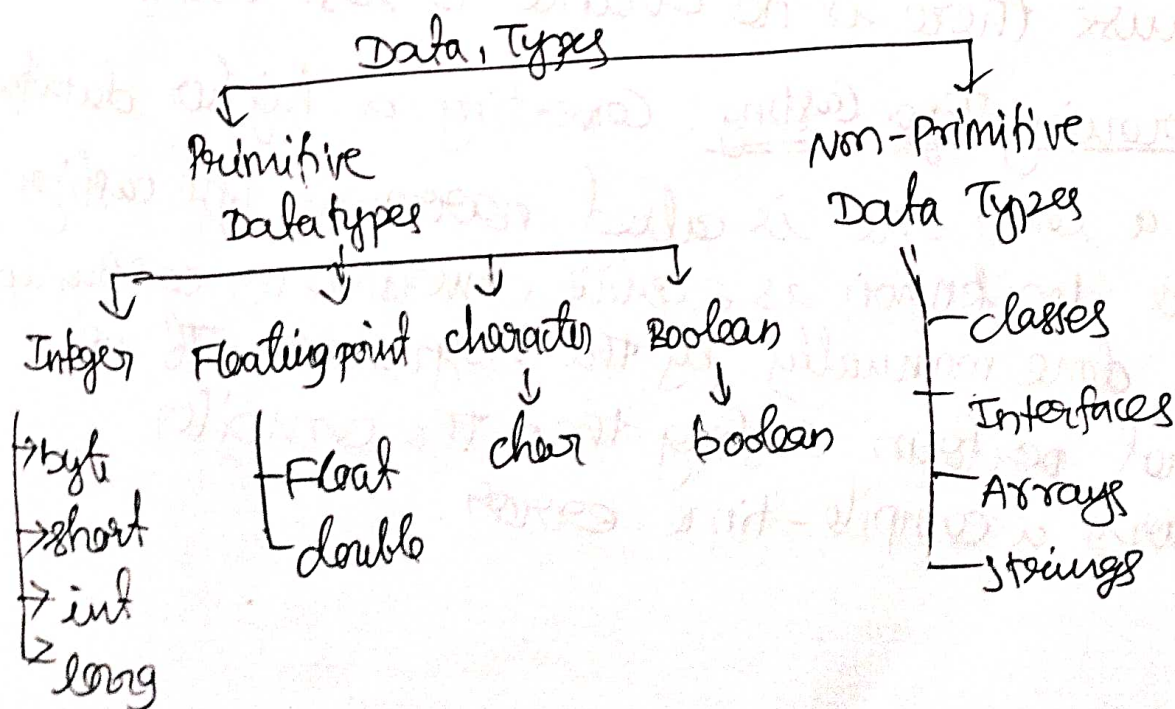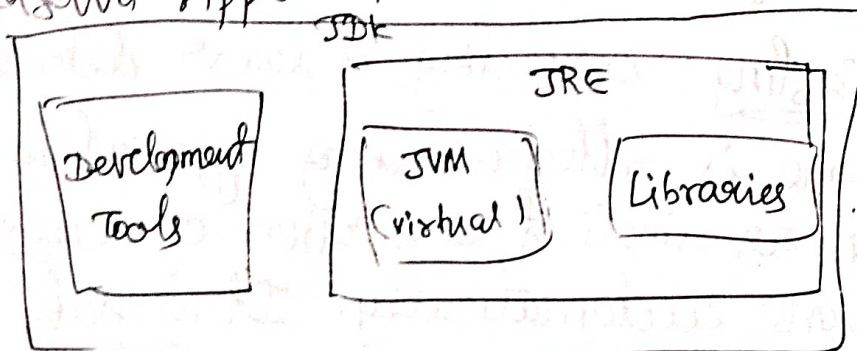* JDK is an implementation of any one of the below given java platform released by Oracle Corporation.
    (i) Standard Edition Java Platform
    (ii) Enterprise "   "   "
    (iii) Micro   "   "   "

* The JDK contains a private Java VM and a few other resources such as an interpreter/loader (Java) a compiler (Javac) an archiver (jar), a documentation generator (Javadoc), etc. to complete the development of a Java Application.

JDK

JRE

| Development Tools | JVM (virtual) | Libraries |

Data Types
   Primitive Data types
      Integer   Floating point   character   Boolean
                                      ↓   ↓
                                    char   boolean
         byte   Float
         short   double
         int
         long

   Non-Primitive Data Types
      classes
      Interfaces
      Arrays
      strings

Typecasting in Java

* In Java, type casting is a method or process that converts a data type into another data type in both ways manually and automatically.
  The automatic conversion is done by the compiler and manual conversion performed by the programmer.

Narrowing Type casting →

double → float → long → int → short → byte

← widening Type casting

Types of Type Casting

* There are two types of type casting:

Widening Type Casting: converting a lower data type into a higher one is called widening type casting. It is also known as implicit conversion or casting down. It is done automatically. It is safe because there is no chance to lose data.

Narrowing Type Casting: Converting a higher data type into a lower one is called narrowing type casting. It is also known as explicit conversion or casting up. It is done manually by the programmer. If we do not perform casting then the compiler reports a compile-time error.