JVM : source code -> byte code and those frequently used part is converted into machine code for fast operation (instant compilation).

Download applet and run in native browser.

Int, short, long, byte. No unsigned integer type.

Char type consists of 16 bits.

Keyword “final” and “static”

Circuited/non-circuited and/or.

Safe type-casting among byte, short, int, long, float and double:

1. Char to int
2. Byte to short
3. Short to int
4. Int to long
5. Int to float
6. Int to double
7. Long to float
8. Long to double

Type casting when performing 2-operand algorithmic operations:

1. If one is double, convert the other to double
2. If one is float, convert the other to float
3. If one is long, convert the other to lone
4. Otherwise, convert both to integer

immutable string. A string cannot be modified.

“” and null

Use codePointAt() instead of charAt() to traverse characters in a string object.

Label break and label continue.

BigInteger and BigDecimal, two clases in java.math.

Rather than returning the reference to an object member, calling clone to produce a copy of the member and return its reference to the caller.

Initialization block.

Only support public inheritance.

Static binding: for methods with “final”, “private” or “static” qualifiers.

methods in a subclass must be more visible that those in a super class (overridden methods).s

A method qualified by “final” cannot be overridden by subclasses.

A class qualified by “final” cannot be inherited.

instanceof , getClass, equals, abstract

ArrayList

auto boxing and unboxing, wrapper (Integer, Float, Double, Long, Byte, Short, …)

Objects of Wrapper classes are immutable.

varargs

reflection, Class, forName, newInstance

tagging interface

inner class (with a ref to the object of outer class)

try-with-resource (auto close)

As long as the method is private, the designers of the class can be assured that it is never used outside the other class, so they can simply drop it. If a method is public, you cannot simply drop it because other code might rely on it.

The final modifier is particularly useful for fields whose type is primitive or an immutable class. (A class is immutable if none of its methods ever mutate its objects. For example, the String class is immutable)

Use factory methods instead of constructors.