### **Sun's Basic Code Conventions:**

1. **line length** - Lines should not be longer than 80 characters.
2. **indentation** - Each indentation unit must be 4 spaces.
3. **wrapping lines** - Break after a comma, before an operator, align new line with beginning of expression at same level of previous line. A wrapped line should begin by indenting twice to differentiate between a wrapped line and a scope change.
4. **implementation comments vs. javadocs** - Implementation comments (/\*,//) are means for comments relating to the internal design of a class. Javadocs (/\*\*) are meant to describe how to use a class from an implementation-free perspective.
5. **combining variable declarations of like type** - Declare each variable on it's own line.
6. **initialization** - Always initialize local variables where they are declared.
7. **declaration placement** - Always place variable declarations at the beginning of the block in which they will be used.
8. **single-line if-statements** - Always use braces after an if statement.
9. **blank lines** - Always insert two blank lines between code sections and between class and interface definitions. Insert a single line between local variables in a method and its first statement, before a block or single-line comment, or between logical sections inside a method, and between method declarations.
10. **flow control statements** - During "if/else" blocks, else should reside on the same line as the close curly brace of the preceding if. The same pattern should be used for "try/catch/finally" blocks.
11. **setter and getter names** - All properties (instance variables) are private, with public setters named with the following pattern, for an object **thing**:
    * The property declaration: **private String thing;**
    * The setter (always uses the word "set"): **public void setThing(String thing){...}**
    * The getter (uses get except for booleans, in which case "is" and "has" are allowed): **public String getThing(){...}**

Source File Declaration Rules in Java

Today lets see rules associated with declaring classes, import statements, and package statements in a source file. We can call them as declaration rules in Java.

1. There can be only one public class per source code file.
2. Comments can appear at the beginning or end of any line in the source code file, they are independent of any of the positioning rules discussed here.
3. If there is a public class in a file, the name of the file must match the name of the public class. For example, a class declared as public class Animal { } must be in a source code file named Animal.java.
4. If the class is part of a package, the package statement must be the first line in the source code file, before any import statements that may be present.
5. If there are import statements, they must go between the package statement (if there is one) and the class declaration. If there isn’t a package statement, then the import statement(s) must be the first line(s) in the source code file. If there are no package or import statements, the class declaration must be the first line in the source code file.
6. import and package statements apply to all classes within a source code file. In other words, there’s no way to declare multiple classes in a file and have them in different packages, or use different imports.
7. A file can have more than one nonpublic class.
8. Files with no public classes can have a name that does not match any of the classes in the file.

##### **Class Declaration in Java**

Classes are a blueprint for creating individual objects that contain the general characteristics of a defined object type. A modifier may or may not be used to declare a class.

##### **Syntax**

modifier **class** **myClass** { *//class header*

*//field, constructor*

*//method declarations*

};

##### **Notes**

The class body contains constructors for initializing new objects, declarations for the fields that provide the state of the class and its objects, and methods to implement the behaviour of the class and its objects.