



JAVA PROGRAMMING LECTURE NOTES - 2

TSHIPUKE V

Object – Orientated Programming Terminology

Encapsulation in Java is a *process of wrapping code and data together into a single unit*

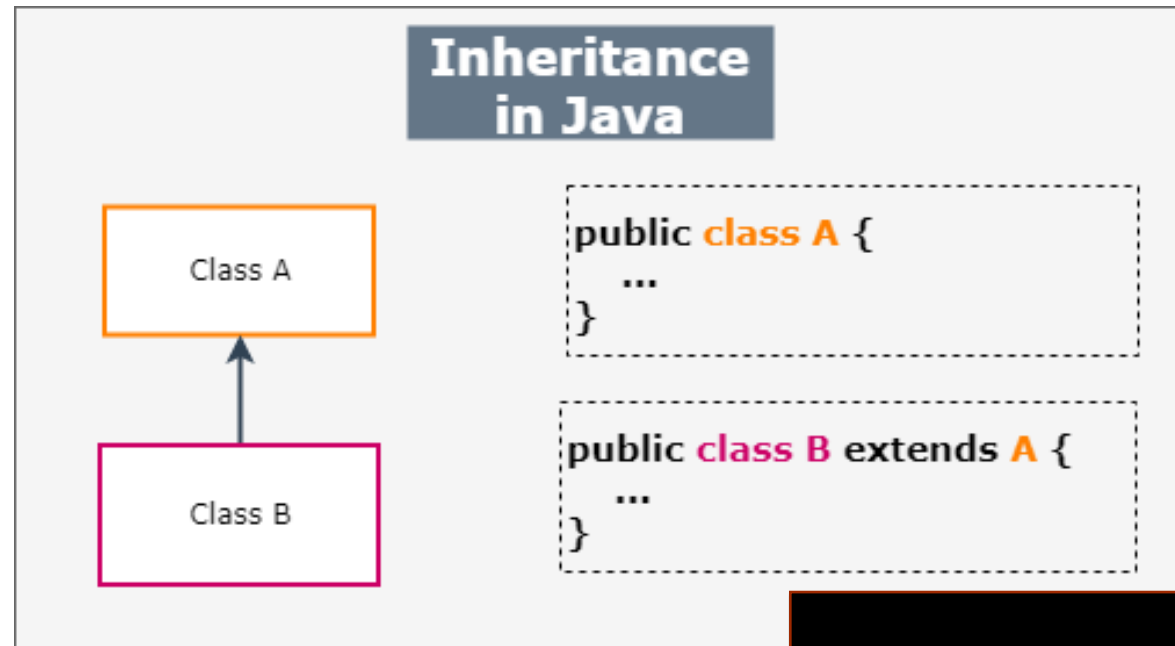
Example: a capsule which is mixed of several medicines.



Object – Orientated Programming Terminology

Inheritance in Java is a mechanism in which one object acquires all the properties and behaviors of a parent object.

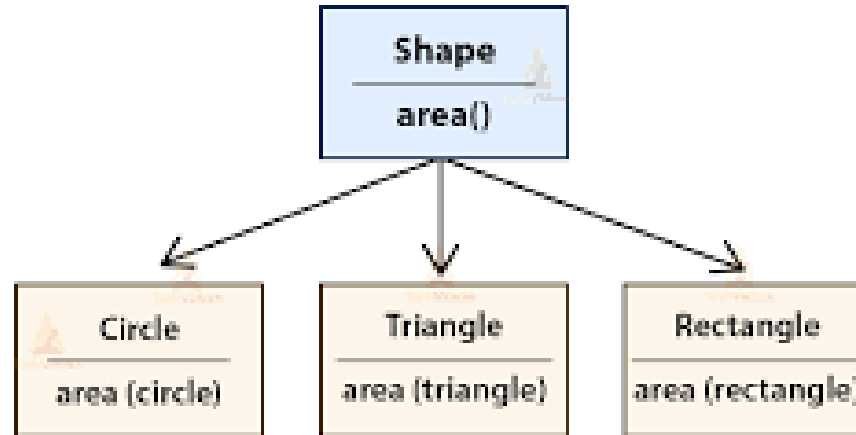
The idea behind inheritance in Java is that you can create new classes that are built upon existing classes. When you inherit from an existing class, you can reuse methods and fields of the parent class.



Object – Orientated Programming Terminology

Polymorphism is the ability of an object to take on many forms. The most common use of **polymorphism** in OOP occurs when a parent class reference is used to refer to a child class object.

Example of Polymorphism in Java



Object – Orientated Programming Terminology

Abstraction is a process of hiding the implementation details and showing only functionality to the user.

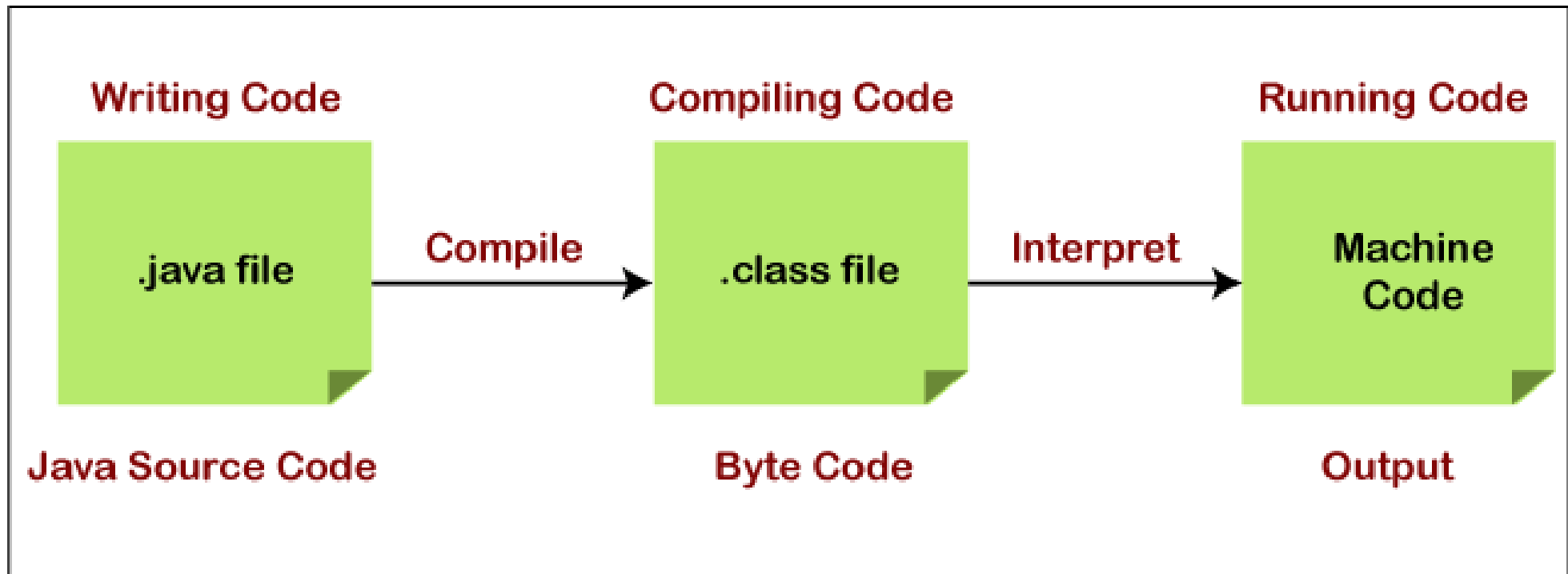
For an example you might know how a car looks like and how to drive, but you don't know how to build a car

COMPILER

Compiler - A compiler is a computer program that translates computer code written in one programming language into another language.

JVM - (Java Virtual Machine) is an abstract machine. It is a specification that provides runtime environment in which java bytecode can be executed.

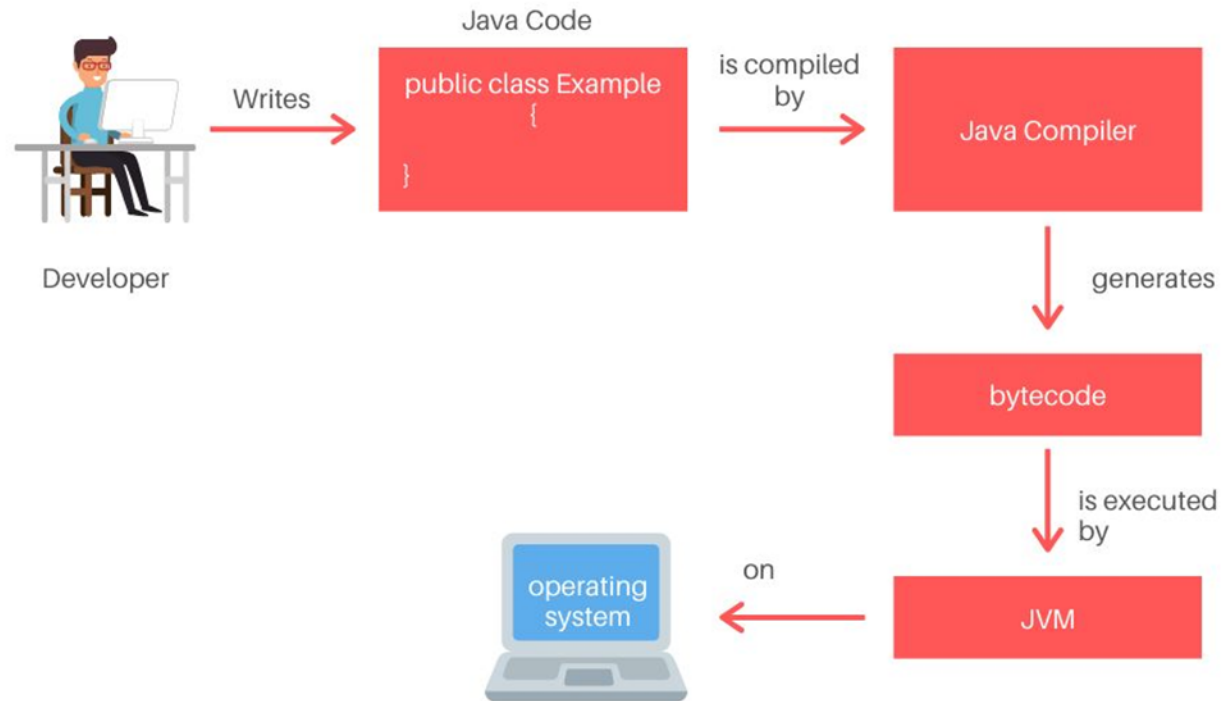
How a Compiler Works



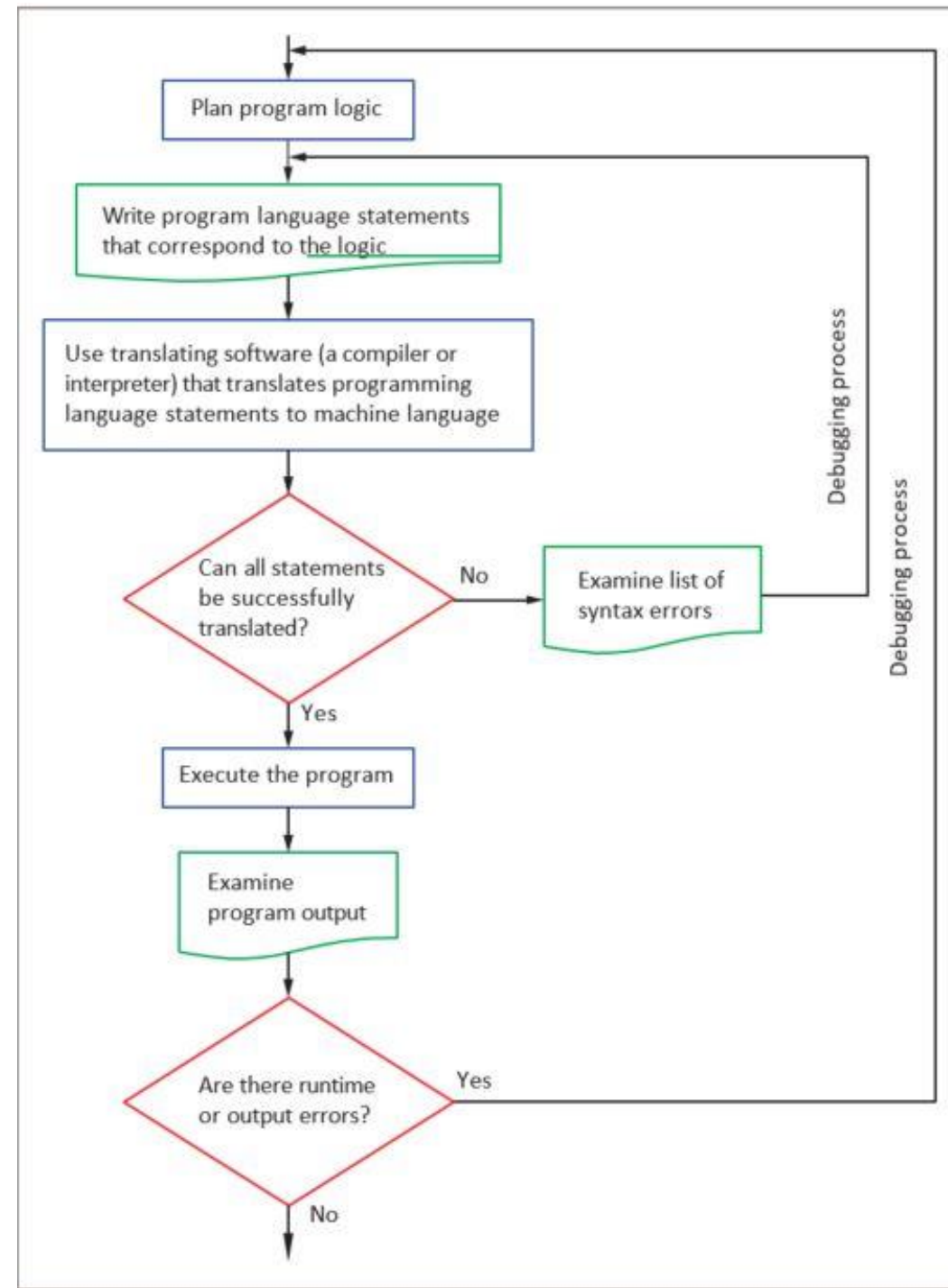
How Java Code is Executed



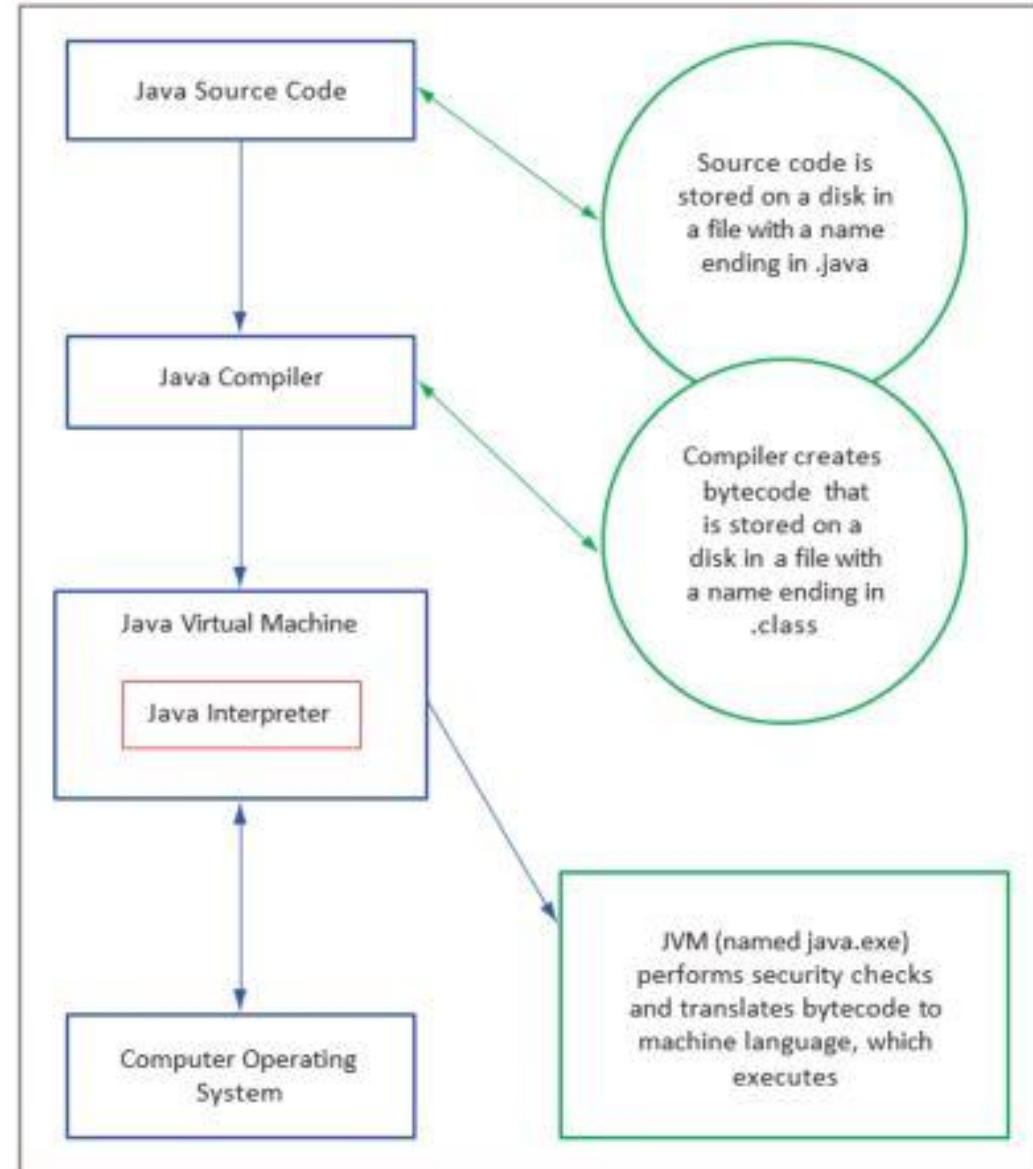
HOW JAVA CODE IS EXECUTED



Java Program Logic



JAVA ENVIRONMENT

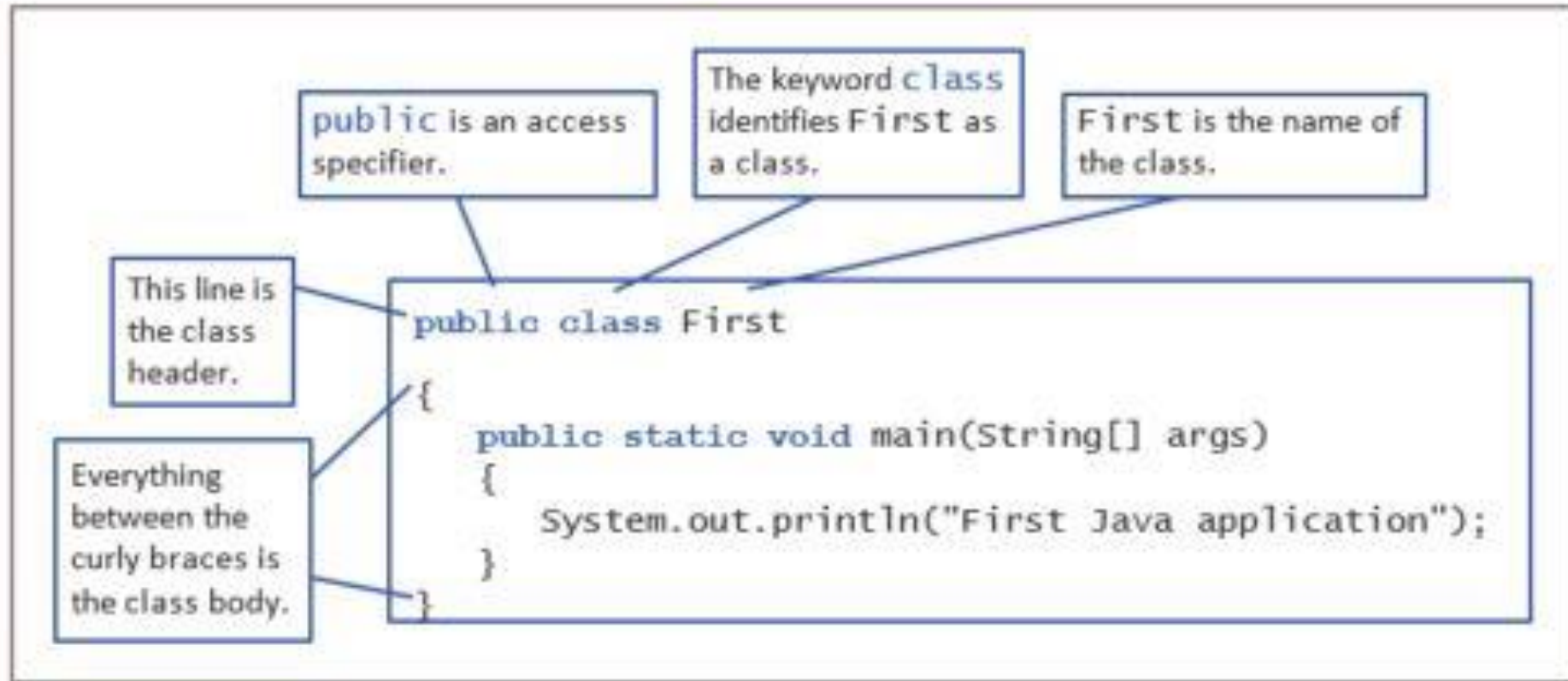


JAVA PROGRAM STRUCTURE

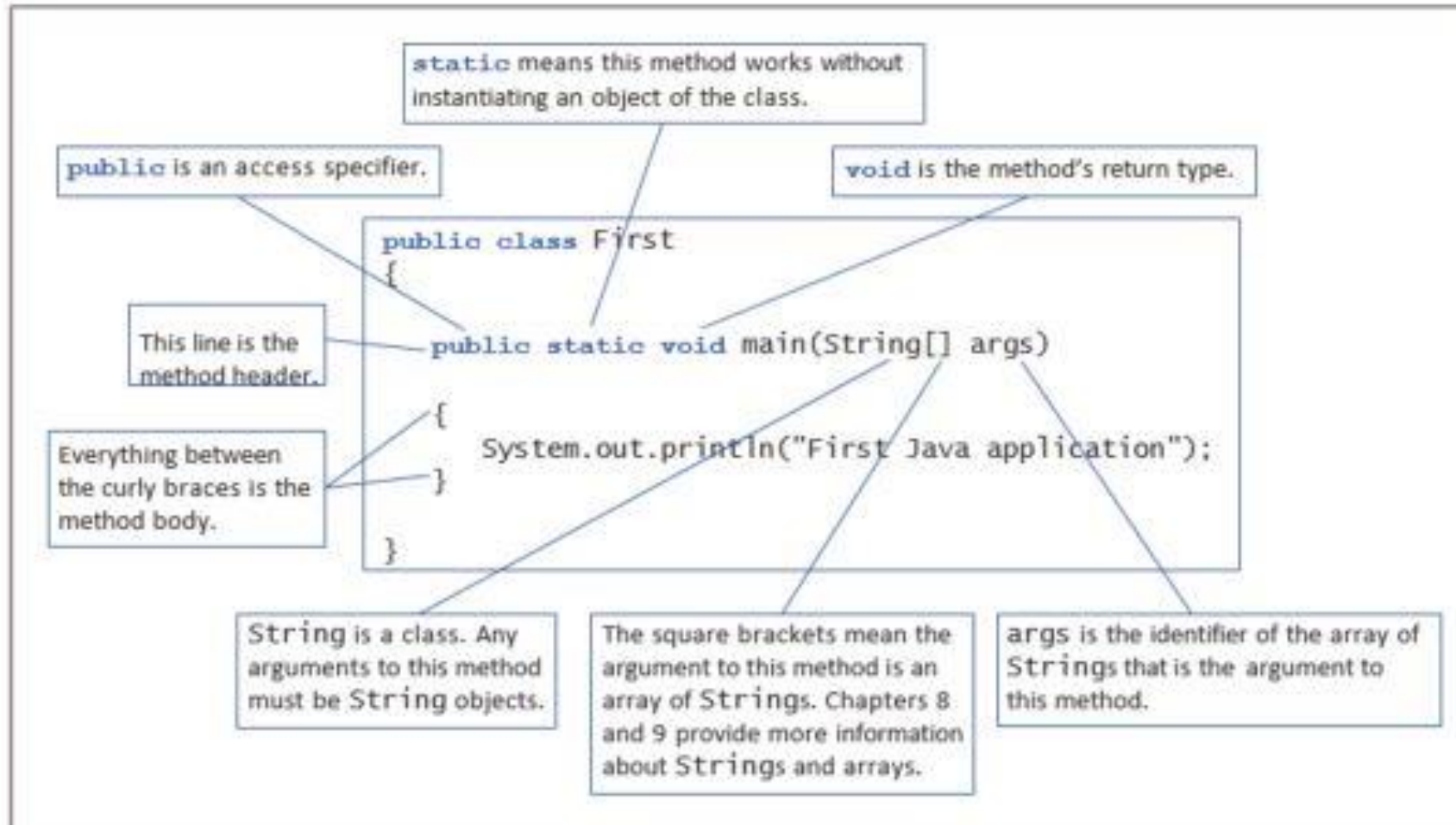
```
public class First
{
    public static void main(String[] args)
    {
        System.out.println("First Java application");
    }
}
```

Figure 1-4 The First class

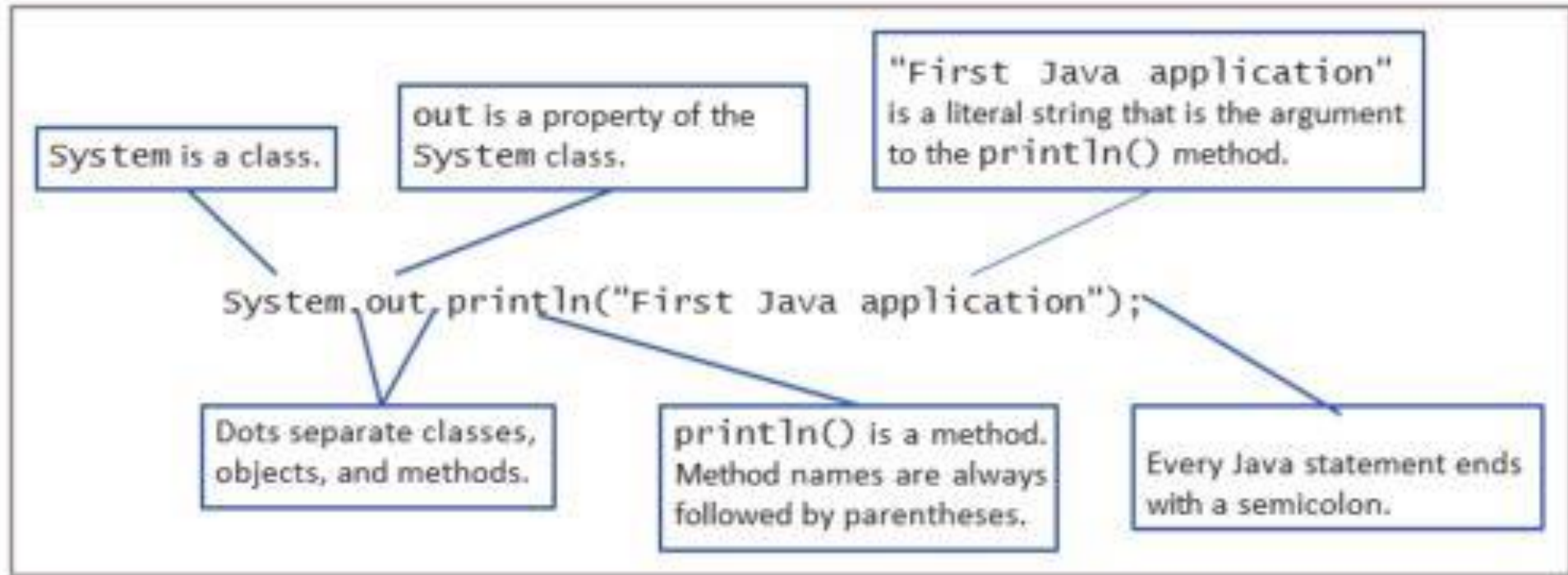
JAVA PROGRAM STRUCTURE EXPLAINED



UNDERSTANDING MAIN() METHOD



UNDERSTANDING PRINT-OUT SYSTEM



THE END

