Main Features of Java

* WORA Write Once Run Anywhere. You can run a Java application on anything that has a JVM
* No Pointers!!! You as the programmer cannot create pointers. You cannot personally manage memory in Java. Java will do it for you completely.
  + Garbage collection, unreferenced objects are deleted automatically
* 99% OOP language. Primitives and Lambdas. Makes your code very modular therefore very scalable
* Java has immense libraries and support for developers
* Language of choice for Android (big in mobile development and web apps)
* Compiled language. You write the source code (human readable) and it compiles into Java Byte code that can be executed by a JVM.
  + Something.java 🡪(compiles) Something.class (java byte code what is actually executed and run by a machine)

OOP (Object Oriented Programming)

* Programming Paradigm (approach to programming)
  + Functional
  + OOP
  + Procedural
  + Imperative
  + Aspect
* Class
  + Blueprint for an object
* Object
  + Instance of a class
  + State
    - Variables that are attached to that object
  + Behavior
    - Methods attached to that object
* Pillars of OOP
  + Abstraction
    - Hiding the implementation of your code
    - Abstract Classes and Interfaces in Java
  + Polymorphism
    - One object many labels
  + Inheritance
    - The ability of classes to derive code (inherit code) from another class
    - DRY (Don’t Repeat Yourself)
  + Encapsulation
    - To protect fields and methods from other parts of your application.