What is Java ?

Java is a bit like C (syntax is very similar)

There are however some important differences:

- No explicit pointers (no * & ->)
- Automated memory management (no malloc/free)
- Support for various Object Oriented constructs
- Greater platform independence (WORA)...

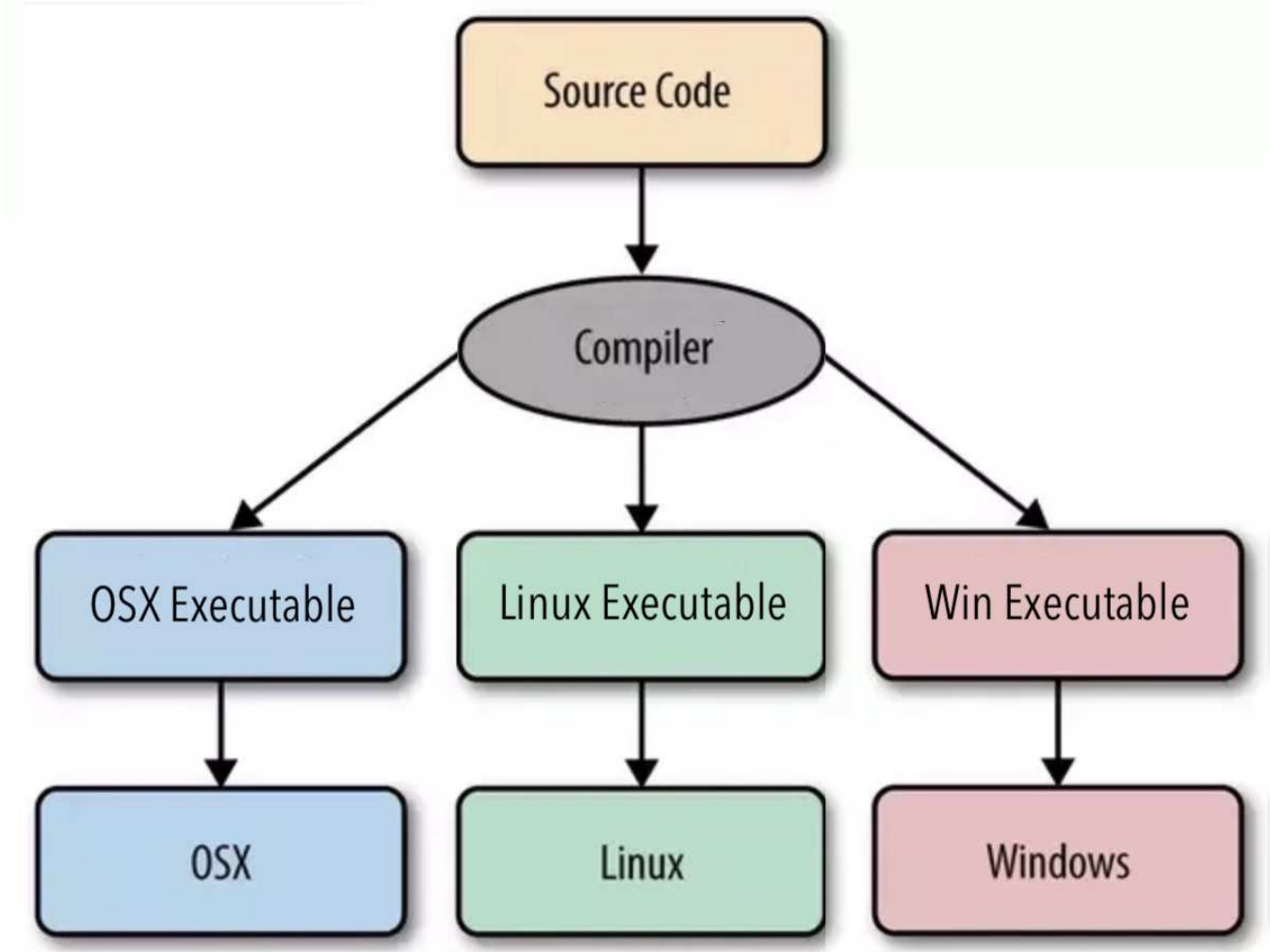
Write Once, Run Anywhere

Power feature: Java runs the same on all platforms
(Except Android Java which is different !)

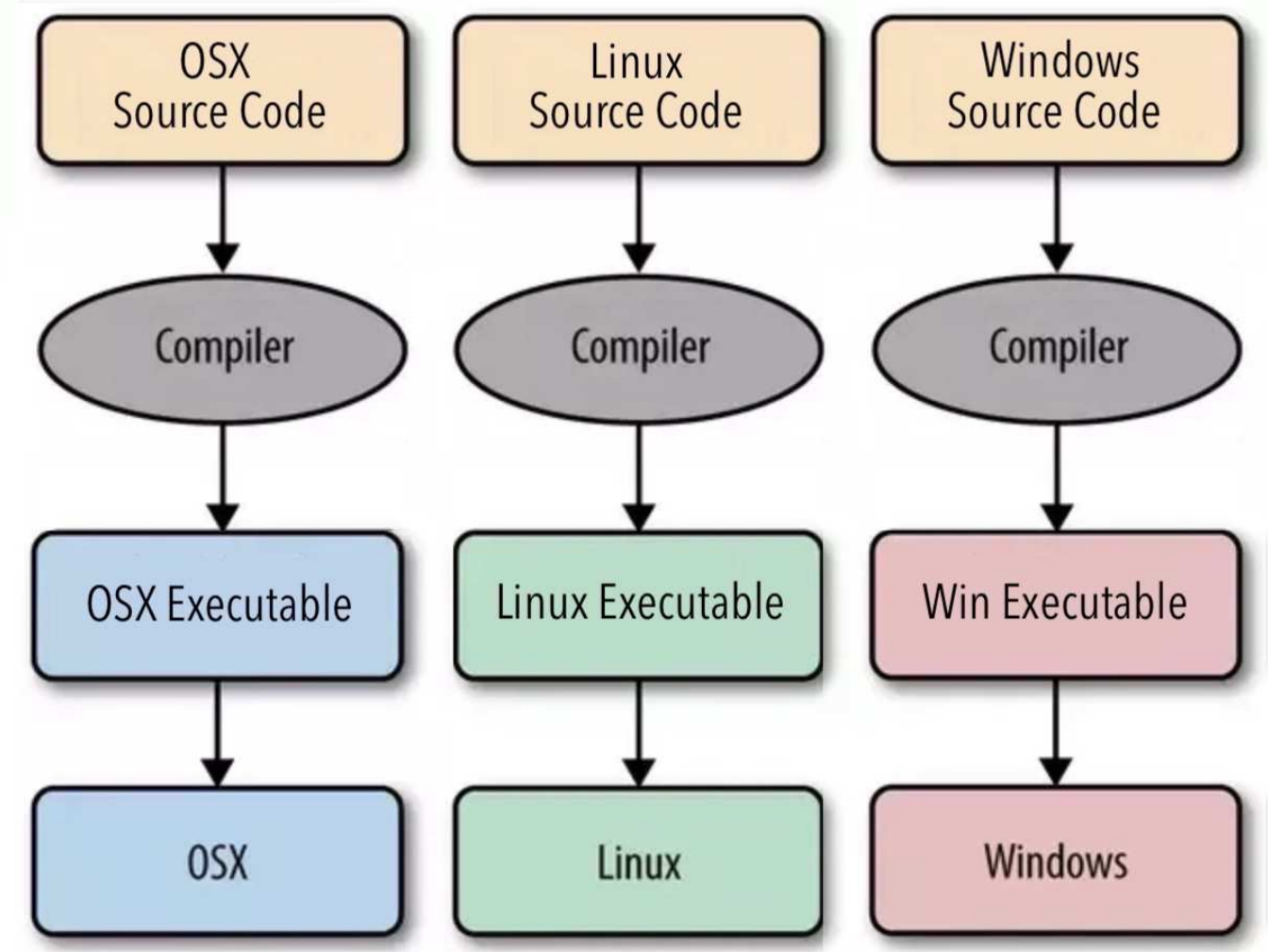
Source code compiled to cross-platform "bytecode"
(midway between source and binary executable)

Bytecode is then interpreted at runtime
By a standardised "Virtual Machine"
(That abstracts over the low-level detail of host OS)

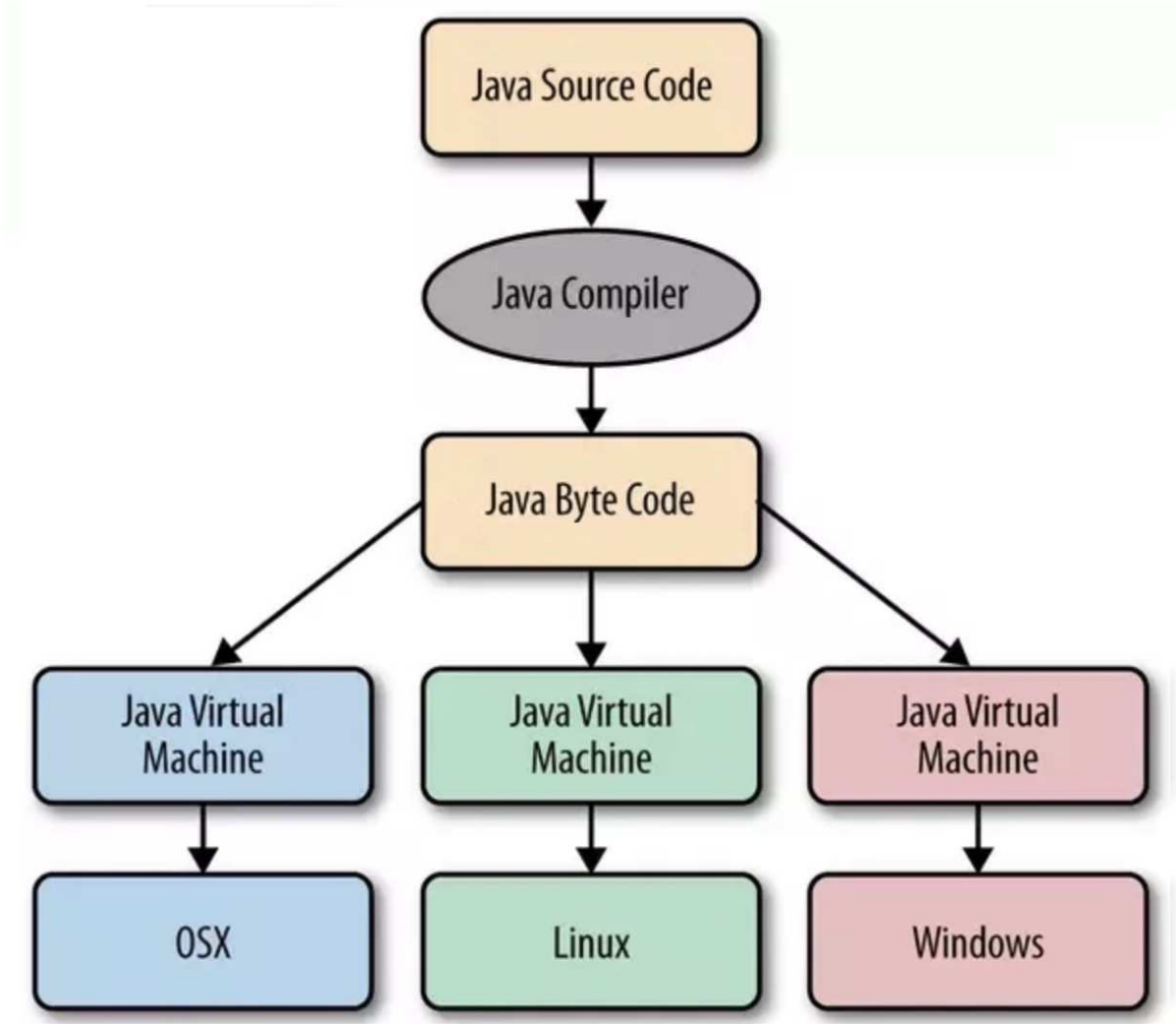
C Programming (in Theory)



Actual C Programming !



Java Programming



Performance

C has a reputation for being fast !

Java for being a little more "leisurely"

(Due to the overhead of Bytecode interpretation)

HOWEVER

Almost all Java Virtual Machines use "JIT" compilers

That convert the bytecode into native executables

"Just-In-Time" to be run

So the performance difference is not that big

Use of Java

Java is a very popular programming language
https://www.youtube.com/watch?v=Og847HVwRSI

Used for large servers, desktop applications,
mobile devices, embedded processors etc.

It has very little in common with JavaScript !
Other than a partially similar name
(and some common syntax)