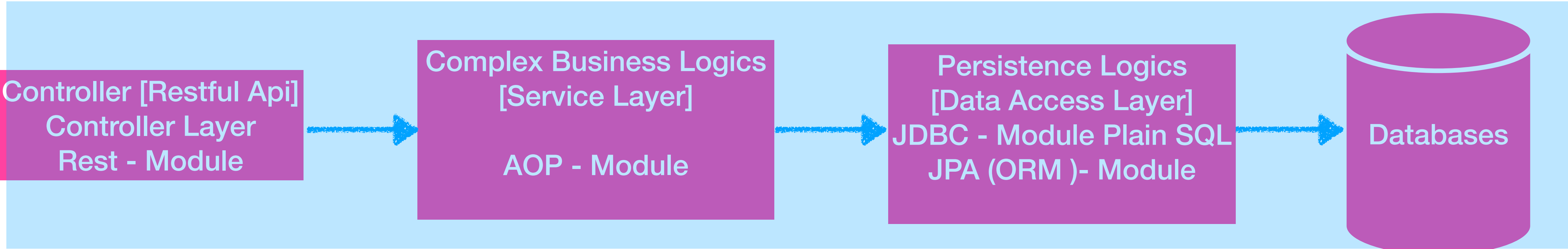


JSE —> Design Patterns [Low Level Design]

Problem Solving with Collections [Data Structures]

Oracle

Spring Boot
Core - Module
AOP - Module
JDBC - Module Plain SQL
JPA (ORM)- Module
Rest - Module



Mocriservices

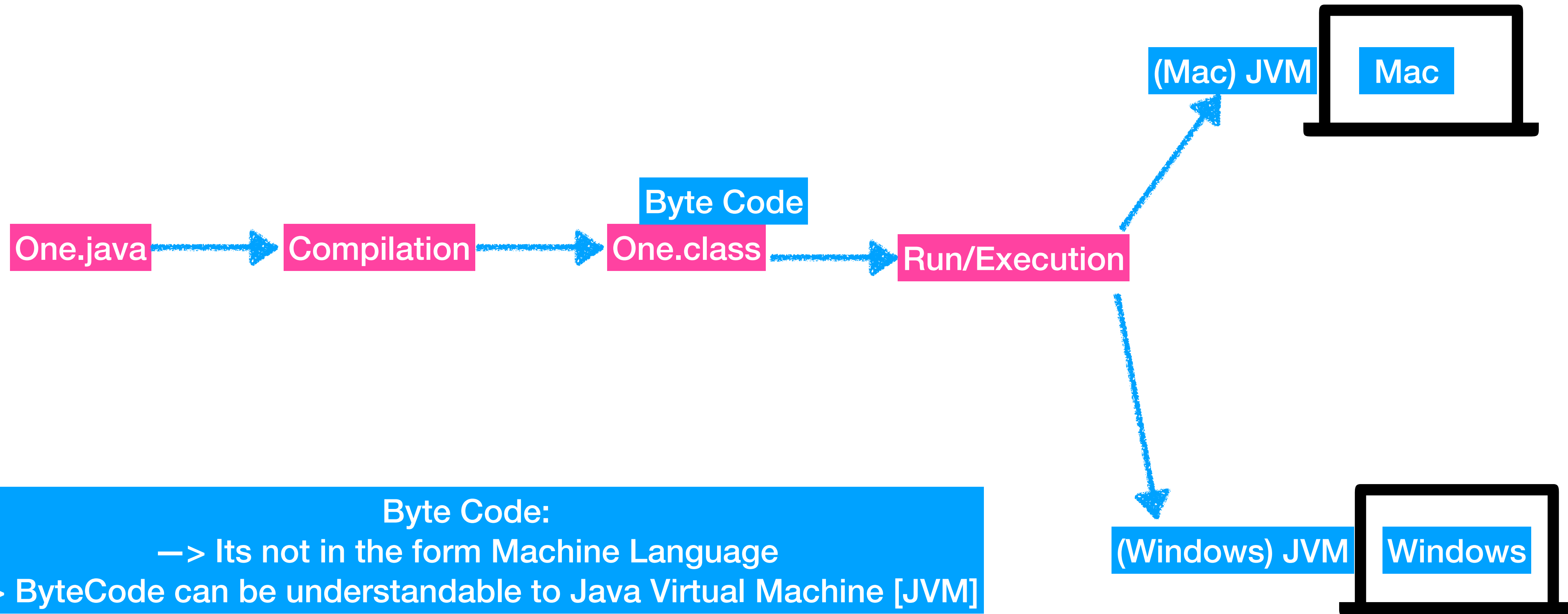
Dynamic Scale up

Maintaining

One Project with SpringBoot

One Project with MicroServices

JSE [Java Standard Edition] - Core Java



JDK [Java Development Kit]

Java Tools

javac --> For compilation
Syntax : javac fileName.java
Ex: javac One.java

java --> For Run/Execute .class file
Syntax : java Dotclass_FileName
Ex: java One

javap --> meta info about .class file
javap One

Java Runtime Environment

JVM - Java Virtual Machine

Helper Files

--> Class Loaders
--> Byte Code Verifier

Stack

Heap

Method Area

4

main-stackFrame
Created

LocalVariable String[]
initialised within a
StackFrame

Then Executes
System.out.println code
so the message
displayed on console.

1

JVM uses class Loader Then loads HelloWorld.class file
into Method Area

2

JVM Verifies the ByteCode using ByteCodeVerifier

3

Converts into Machine Language then call the main
method

HelloWorld.java

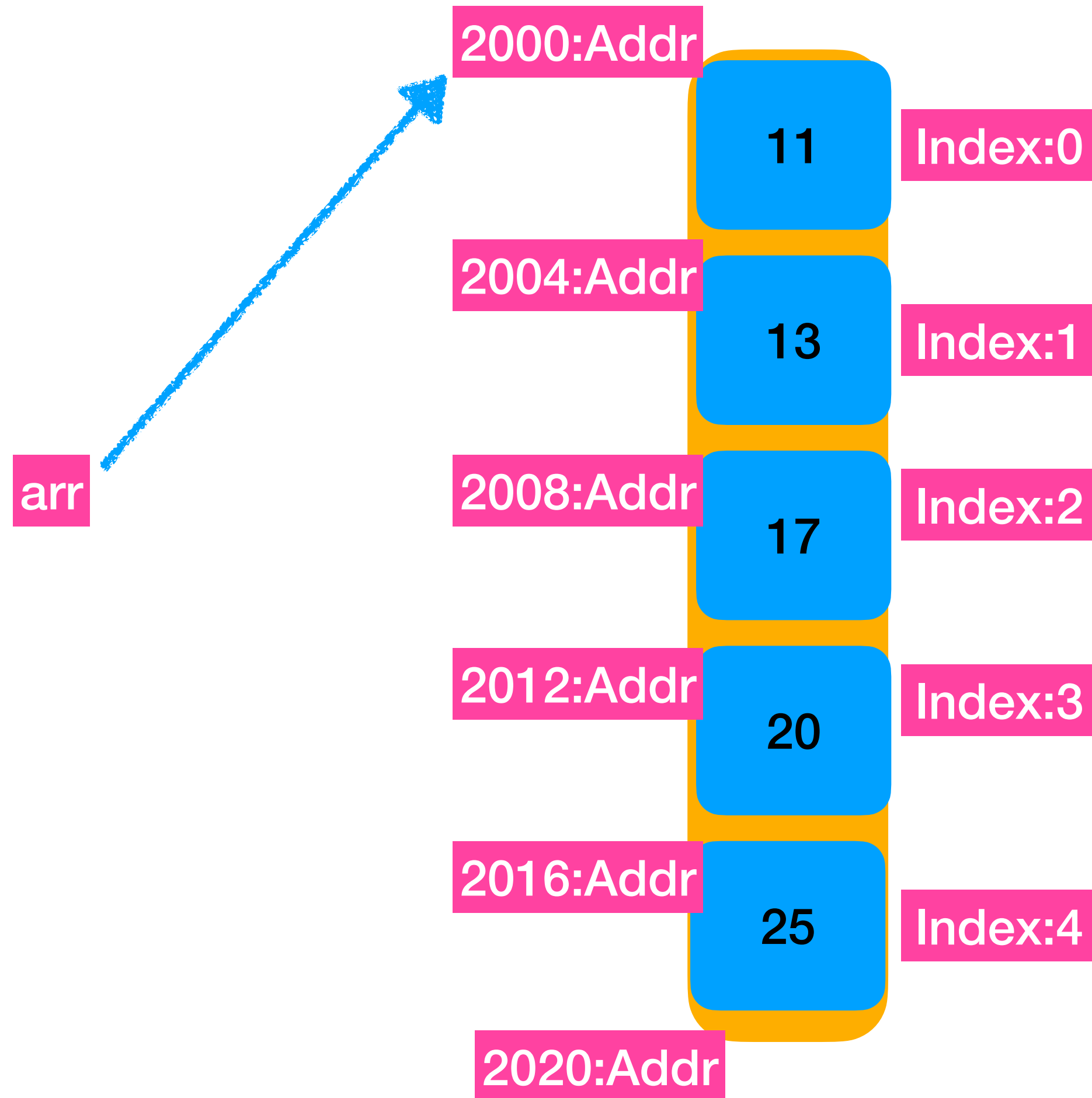
Compilation

Helloworld.class

Run -> java HelloWorld

```
int[ ] arr = {11,13,17,20,25};
```

$5 * 4 = 20$ bytes



```
int[ ] arr = new int[5];
```

$\text{arr}[0] \rightarrow 2000 + 0 * 4 = 2000 \text{ Addr} = 11$

$\text{arr}[3] \rightarrow 2000 + 3 * 4 = 2012 \text{ Addr} = 20$

If we know the index number
value can be accessible in $O(1)$ time