

Not everything is web!

Vedika Dalmia
Vasileia Tzamtzi

Agenda

- Our domain
- C – How it all started (sort of..)
- Object oriented programming
- C++
- Python
- Java
- More Java

Quick survey

- Programming for > 2 years
- Fortran programmers?
- C Programmers?
- OO Programming
- Java programmers

Our domain

- Desktop applications
 - Word, Excel, PowerPoint(!), iTunes, Eclipse etc..
- Mobile applications
- Games
- AI
- Research
- Operating Systems
- Embedded Systems – more from Maya later

C – A beginners language?

- Pros
 - Small, efficient and powerful
 - Very close to the architecture
 - Base for a lot of modern languages
- Cons
 - It was made for professional users
 - You can go very wrong very easily
 - With great power comes great responsibility...
 - No support of Object Oriented Programming

Object Oriented Programming

- Focus shifted from efficiency to
 - Better management of large projects
 - Easy to read and develop
 - Re-usability
 - Multiple developers
- New languages developed
 - C++ in 1983
 - Python in 1991
 - Java in 1995

C++ - A beginners language?

- Pros

- One of the first
- Very widely used
- Benefit of Object Oriented while still providing low level access
- Really fast

- Cons

- *“C makes it easy to shoot yourself in the foot; C++ makes it harder, but when you do, it blows away your whole leg.”*
- Bjarne Stroustrup

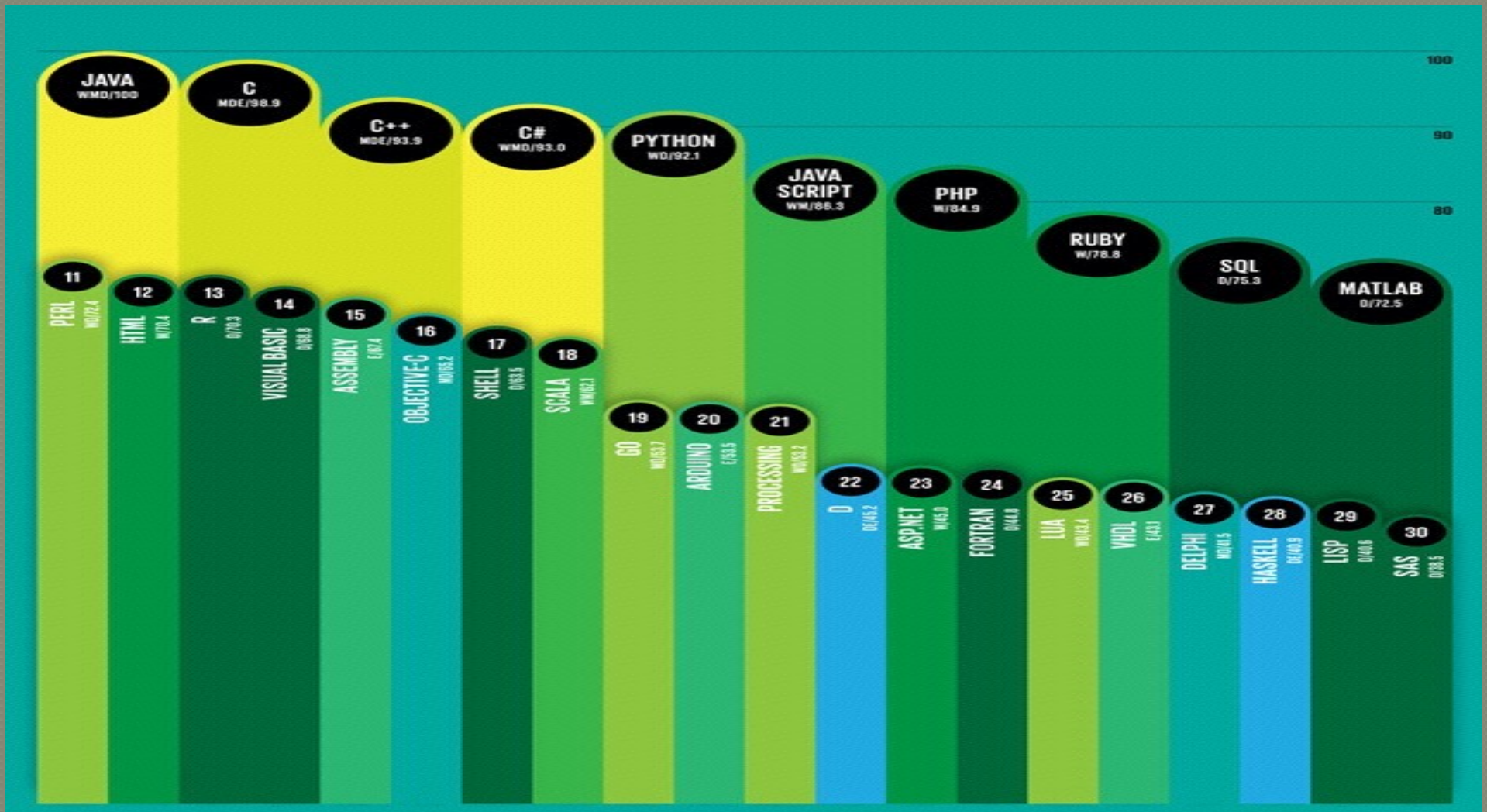
Python – A beginners language?

- YES!
 - Easy to read and write, similar to English
 - Shallow learning curve
 - From writing to result almost instantly
 - Open Source!
 - PyLadies :)
- Cons
 - Great for learning but speed might not work for some applications

And this brings us to....

JAVA

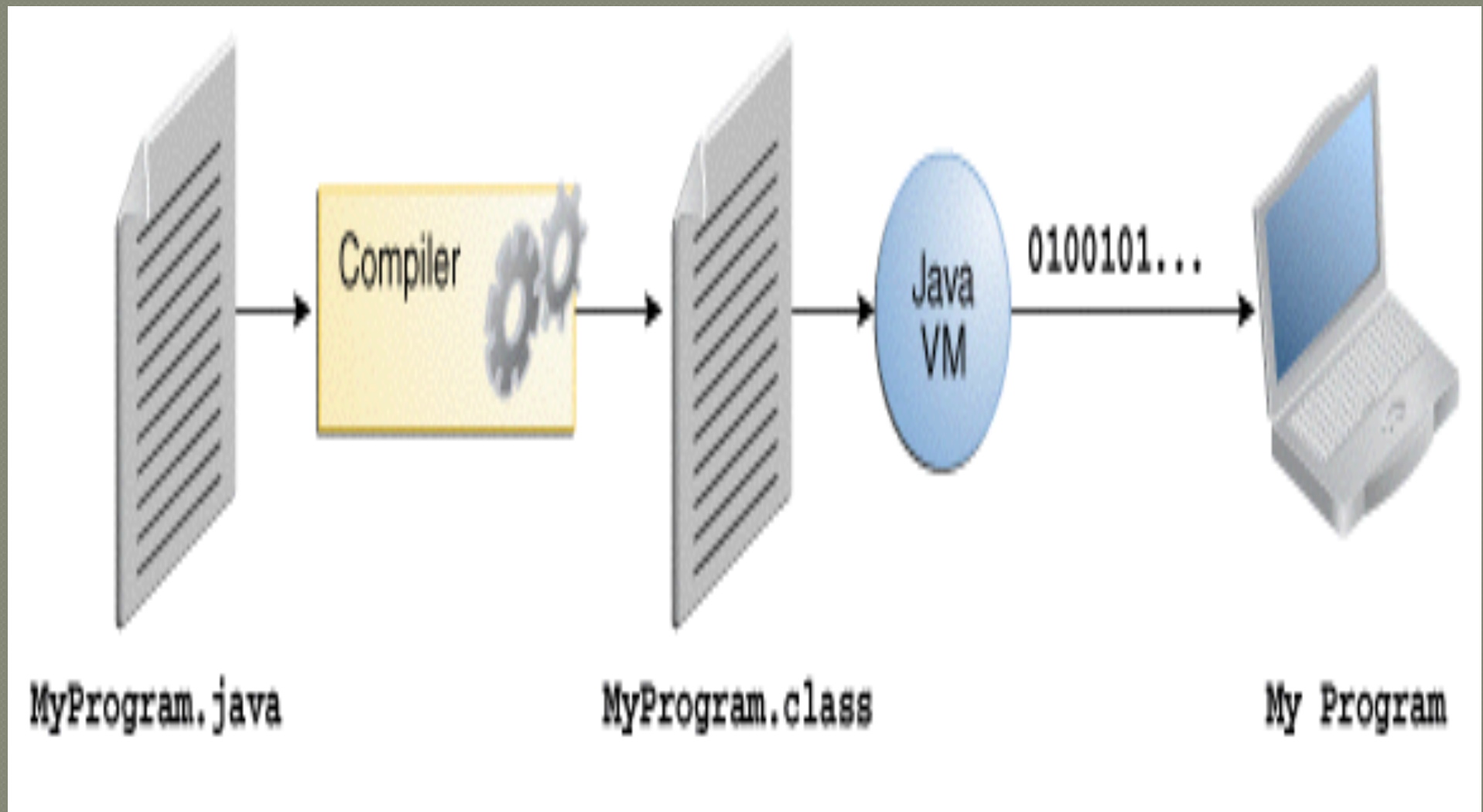
Why Java ?



The Language

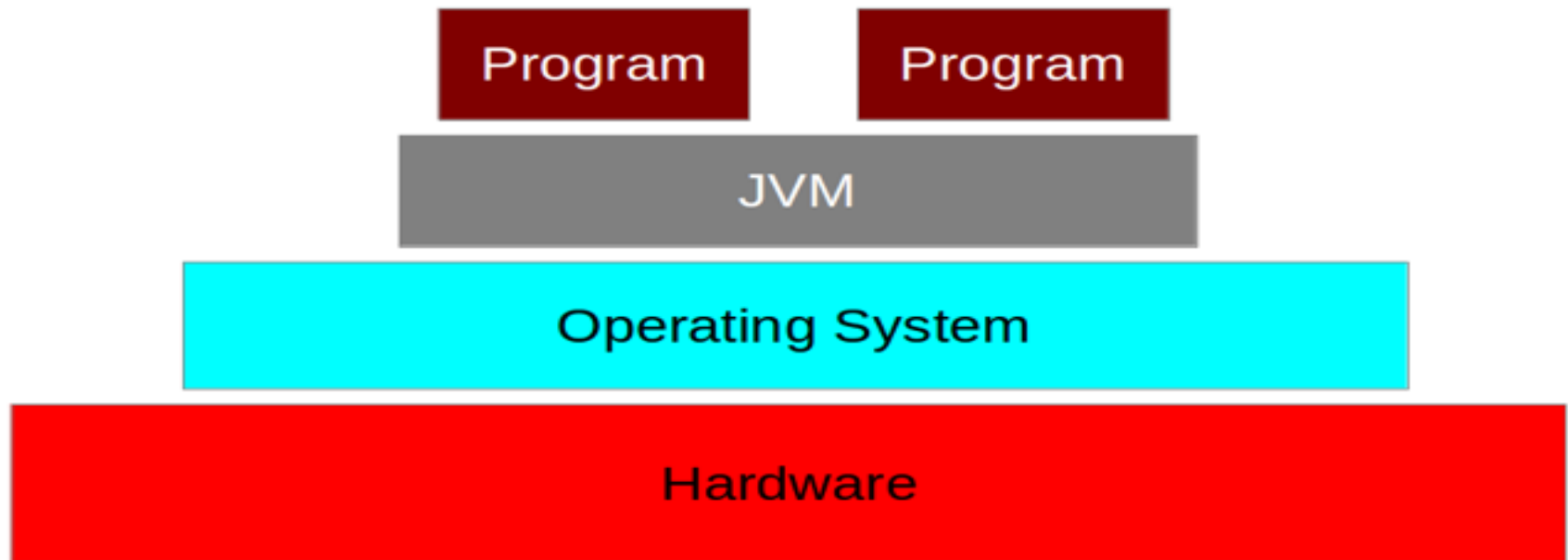
- Strictly object oriented
- No access to memory etc.
- Strongly typed
- Very similar to (based on) C and C++
- Jack of all trades

The Compiler



The Virtual Machine

Java Virtual Machine (VM)



Garbage collector



Thanks!

Questions?