Python Introduction

Hina Arora
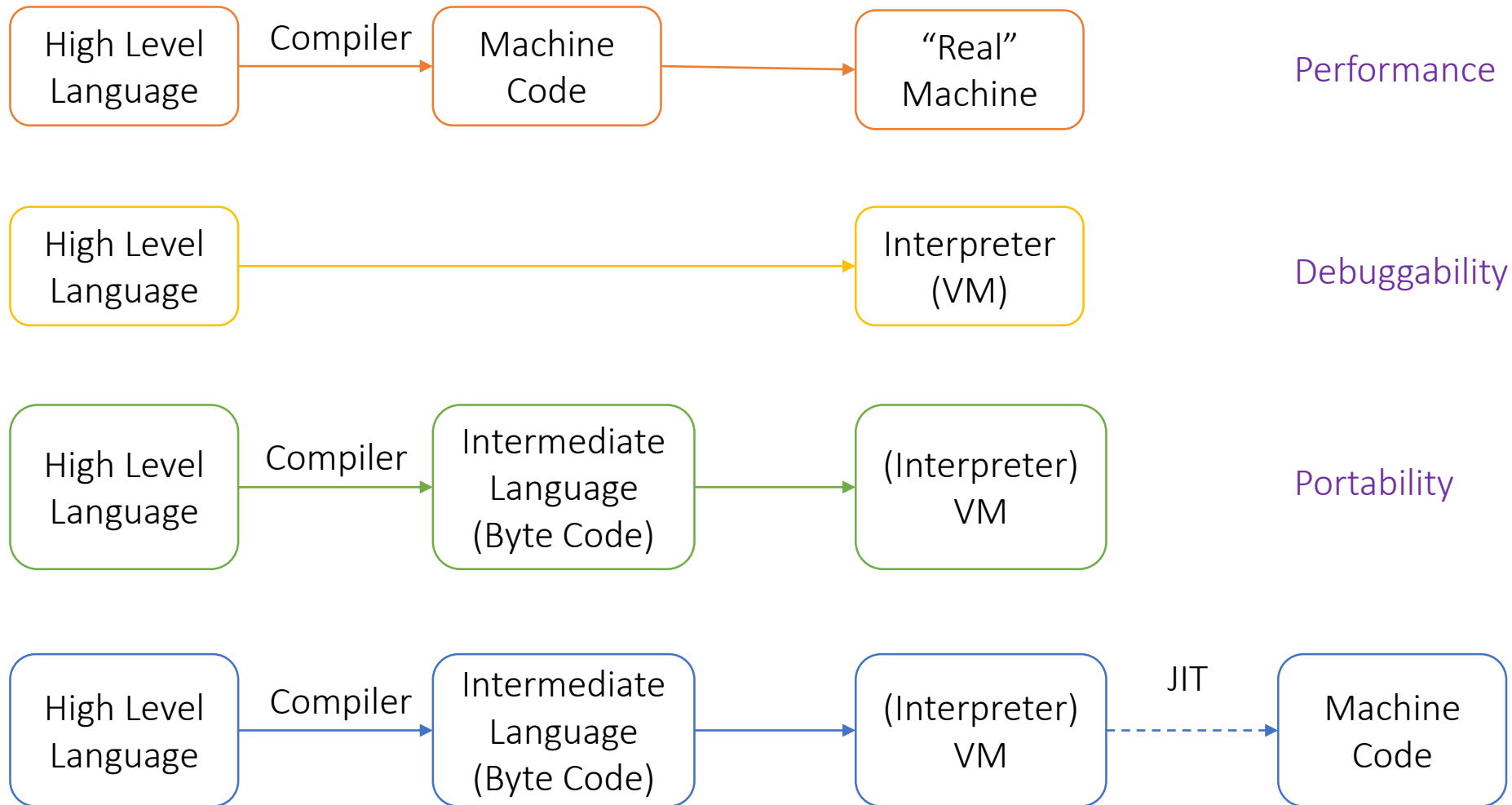
Python Origins

Monty Python

The Pythons in 1969
Back row: Graham Chapman, Eric Idle, Terry Gilliam
Front row: Terry Jones, John Cleese, Michael Palin

https://en.wikipedia.org/wiki/Monty_Python

- Named after the show "Monty Python's Flying Circus"

- Originally created by Guido van Rossum as a hobby

- Now supported by the open source community

- van Rossum continues as "Benevolent Dictator For Life", overseeing the development process, and making decisions where necessary

- Van Rossum went on to work for Google and is now at Dropbox

Review: Program Execution Paradigms

High Level Language → **Compiler** → Machine Code → "Real" Machine   *Performance*

High Level Language → Interpreter (VM)   *Debuggability*

High Level Language → **Compiler** → Intermediate Language (Byte Code) → (Interpreter) VM   *Portability*

High Level Language → **Compiler** → Intermediate Language (Byte Code) → (Interpreter) VM → **JIT** → Machine Code

Python: Language vs Implementation

Implementation

Execution

CPython or 'Python' (C)

IronPython (C#)

Python

Jython (Java)

…

Python Source Code → *CPython Compiler* → Bytecode (.pyc*) → CPython VM

typically seen under _pycache_ dir when you import modules

Python Source Code → *IronPython Compiler* → Bytecode → CLR VM

Python Source Code → *Jython Compiler* → Bytecode → JVM

Type following on Python Console:

```
In [12]: import platform

In [13]: platform.python_implementation()
Out[13]: 'CPython'
```

Reference: http://www.toptal.com/python/why-are-there-so-many-pythons

Python coding best practices

- The Zen of Python:
  https://www.python.org/dev/peps/pep-0020/

- Style Guide for Python Code:
  https://www.python.org/dev/peps/pep-0008/