Software development with Scala

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Part I

The Java Ecosystem

Outline

1 A History Lesson

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and they lived happily ever after... NOT!

Portability

Platform Dependency

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for(os <- List("linux", "mac", "windows"))
  println("If you compile a C program under " + os
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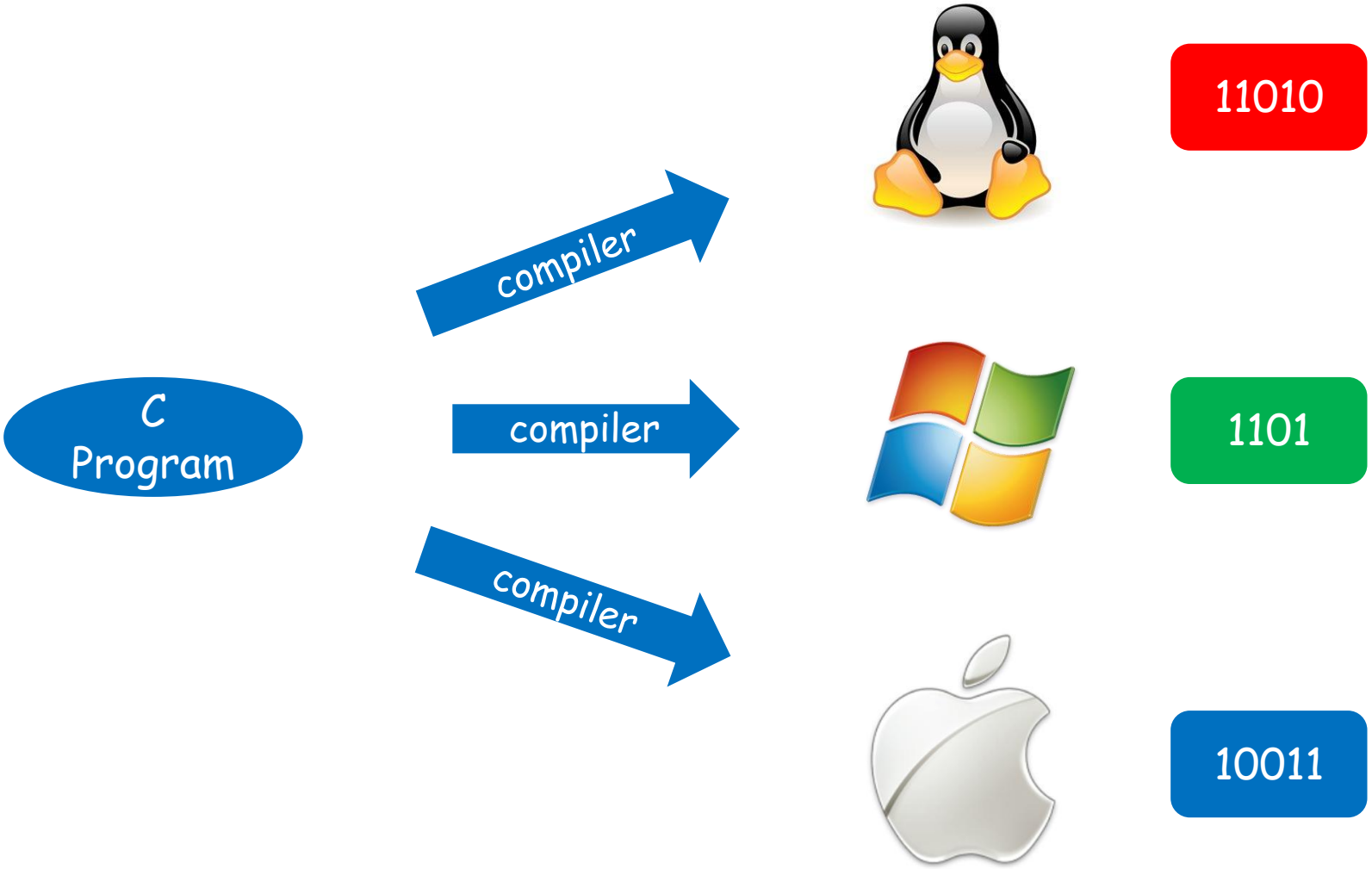
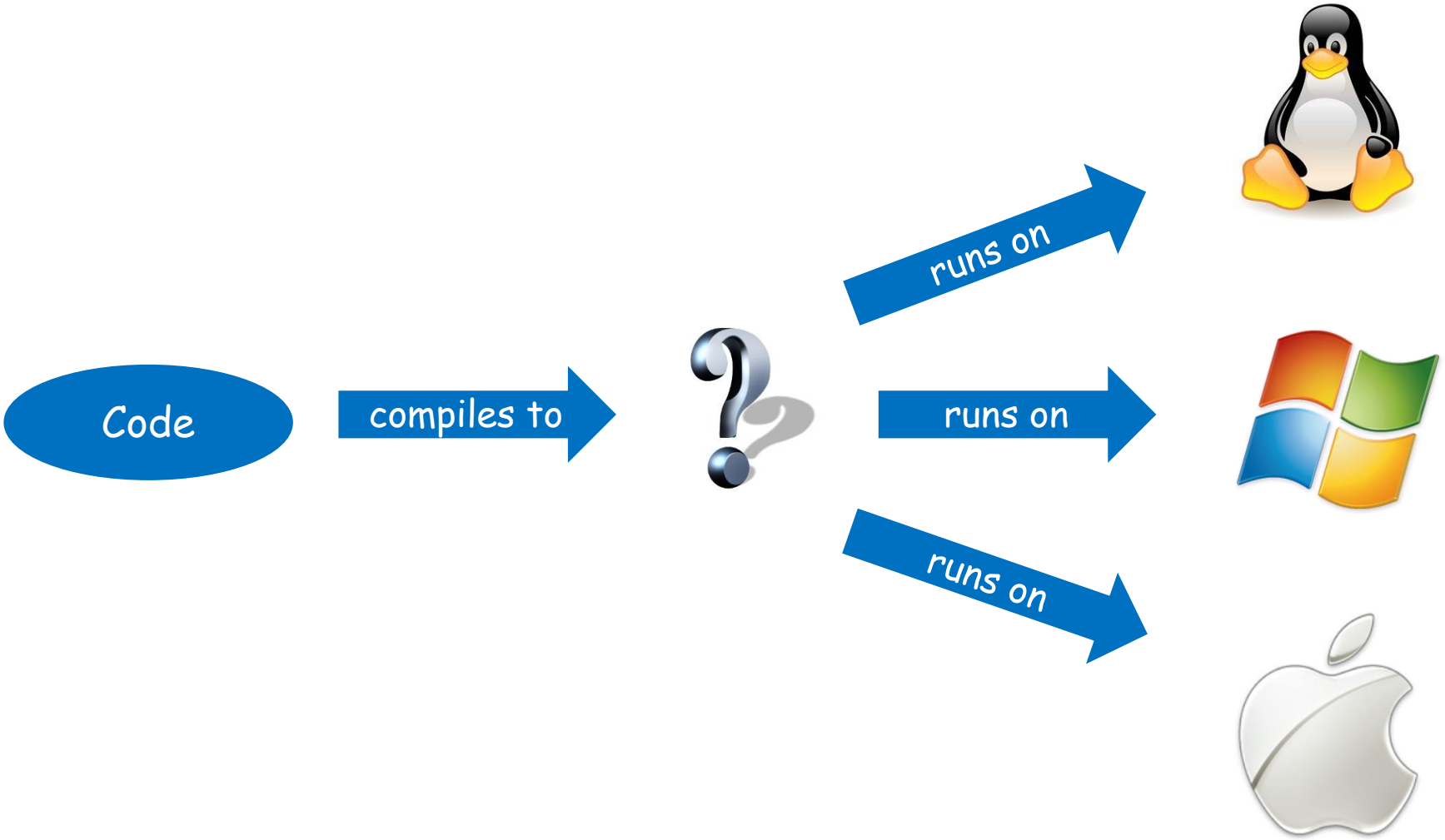
Platform Independency

Write Once, Run Anywhere.

Problem - Unmanaged code



Solution - Managed code



Virtual Machines

Operating System

An operating system is an abstraction over a hardware machine .

Virtual Machine

A virtual machine is an abstraction over an operating system.

Known VMs

Java	Java Virtual Machine (JVM)
.Net	Common Language Infrustructure (CLI)
Android	Dalvik virtual machine
	and *many more*

Managed Programming Languages

Java - runs everywhere

Java	Statically typed OO language
Scala	Statically typed OO & FP language
Clojure	Dynamically typed FP language (*Lisp* dialect)
Groovy	Dynamically typed scripting language
	and *many more*

.Net - runs only on windows

C#	Statically typed OO & FP language
VB	Statically typed OO language
F#	Statically typed FP language
	and *many more*

Managed Programming Languages 2

Android

Java is officially supported. Every JVM language should theoretically work. Scala works. *Few others* work as-well.

Part II

Introducing Scala

Part III

Programming Paradigms

Part IV

Scala's Development Environment

Part V

Programming Styles

Part VI

Higher-Order Functions

Part VII

Growing The Language

Part VIII

Test-driven Development & Clean Code

Part IX

Pattern Matching

Part X

Traits

Part XI

Collections

Part XII

Concurrency

Part XIII

Domain Specific Languages

Part XIV

Higher-Kinded Types