THE RETURN OF JAVA ON THE MOBILE CLIENT

Johan Vos / @johanvos
Niklas Therning / @ntherning

ROBO**VM**

IN THE PAST

- iOS

  – Coordinated by RoboVM

  – Java on iOS, AOT

  – JavaFX possible

    - Eclipse

    - Maven plugin

    - Difficult settings/configuration

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IN THE PAST

- Android

  – JavaFX on Android

  – Based on OpenJFX version y

  – Complex build system:

    • Ant

    • Gradle

    • Required settings and correct paths

WE'RE FIXING THIS

- RoboVM and LodgON joining forces to streamline and accelerate Java(FX) on mobile

- Goal: Lower the barrier for existing Java devs

- WORA

  - 1 code base for desktop, iOS and Android

  - 1 build system to target all platforms

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DEMO #1

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TODAY

- Use your existing JavaFX project with the Gradle build system

- Add apply plugin: 'javafxmobile'

- Run it:

```
./gradlew launchIOSDevice
./gradlew androidInstall
./gradlew launchIpadSimulator
./gradlew launchIphoneSimulator
./gradlew android
```

WHAT DO YOU GET?

- Javafxmobile-plugin, downloaded via Maven Central/ jcenter

- This plugin will retrieve and use the JavaFX mobile runtime SDK's

- JavaFX 8u40-ea4, based on the same JavaFX 8u40 code used on Windows/MacOSX/Linux

- For iOS, the plugin will also retrieve and use the RoboVM Compiler

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STILL TO DO...

- Manually install the Android SDK

- Install Xcode for iOS builds

- Use Java 7 API's in your application
  - Lambda expressions are ok

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THE CODE

```
buildscript {
    repositories {
        jcenter()
    }
    dependencies {
        classpath 'org.javafxports:javafxmobile-plugin:1.0.0-rc1'
    }
}
apply plugin: 'javafxmobile'
mainClassName = 'ensemble.EnsembleApp'
repositories {
    jcenter()
}
jfxmobile {
    ios {
        forceLinkClasses = ['ensemble.**.*']
    }
    android {
        applicationPackage = 'org.javafxports.ensemble'
    }
}
```

TRY IT YOURSELF

- Demo application:

```
hg clone https://bitbucket.org/javafxports/
            javafxmobile-plugin-ensemble

cd javafxmobile-plugin-ensemble

./gradlew tasks

./gradlew androidInstall

./gradlew launchIOSDevice
```

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IDE SUPPORT

- Most IDE's have support for gradle

- No separate plugins needed anymore

- Edit your code in your favorite IDE

- Test on Devices using your favorite IDE

DEMO #2

UNDER THE HOOD

- Android

  – JavaFX 8u40 runs on top of Dalvik

  – Kudos to the Oracle OpenJFX team

  – 1 JavaFX Application == 1 Activity

  – 1 JavaFX Application == 1 Fragment

  – After packaging, your package is a regular Android application, and it can be uploaded to the Play Store

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UNDER THE HOOD

- iOS

  – Same JavaFX 8u40 AOT compiled using RoboVM

  – Builds .IPA package that can be submitted to the App Store

RoboVM???

ROBO**VM**

THE ROBOVM PROJECT

- Goal: Java on iOS

  – and other JVM languages: Scala, Groovy, Clojure, Kotlin, …

- Open-source since Jan 2013

- github.com/robovm

- License allows closed source apps

- www.robovm.com / @robovm

ROBOVM

ROBOVM FEATURES

- Java bytecode to machine code
  - Ahead Of Time, no interpreter, no JIT
  - Fast apps
- Runtime classes based on Android
  - java.*, javax.*, etc incl. I/O, reflection
- Supports 3rd party JAR files
- Supports standard JNI (static)

ROBOVM FEATURES

- Bindings for native iOS APIs
  - Full access to hardware, services, UI, etc

ROBOVM FEATURES

- Integrates with popular Java tools

ROBOVM STATUS

- 100+ apps in App Store

- Currently in beta (1.0 beta 3)

- 1.0 scheduled for Feb 2015

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TIME FOR ACTION!

- JavaFX on mobile is now accessible

- Now it's time to try it out!

- Community support: javafxports.org

- Goal: production ready in Q2

- Commercial support through RoboVM

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?

Check out robovm.com and follow @robovm

Ooh and we're hiring! robovm.com/jobs