Building Mobile Applications: Strategies and Technologies

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About Me:

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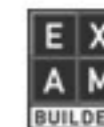
Agenda:

Mobile App Development

4
WAYS

PhoneGap

appcelerator®

titanium™

Sunday, September 22, 13

Agenda:

A quick tour of 4 different mobile development technologies. Strategies for getting started in each.

- iOS Native Development
- Android Native Development
- PhoneGap
- Appcelerator Titanium

Let's try to make sense of it all....

Intent

Eclipse

HTML5

Objective-C

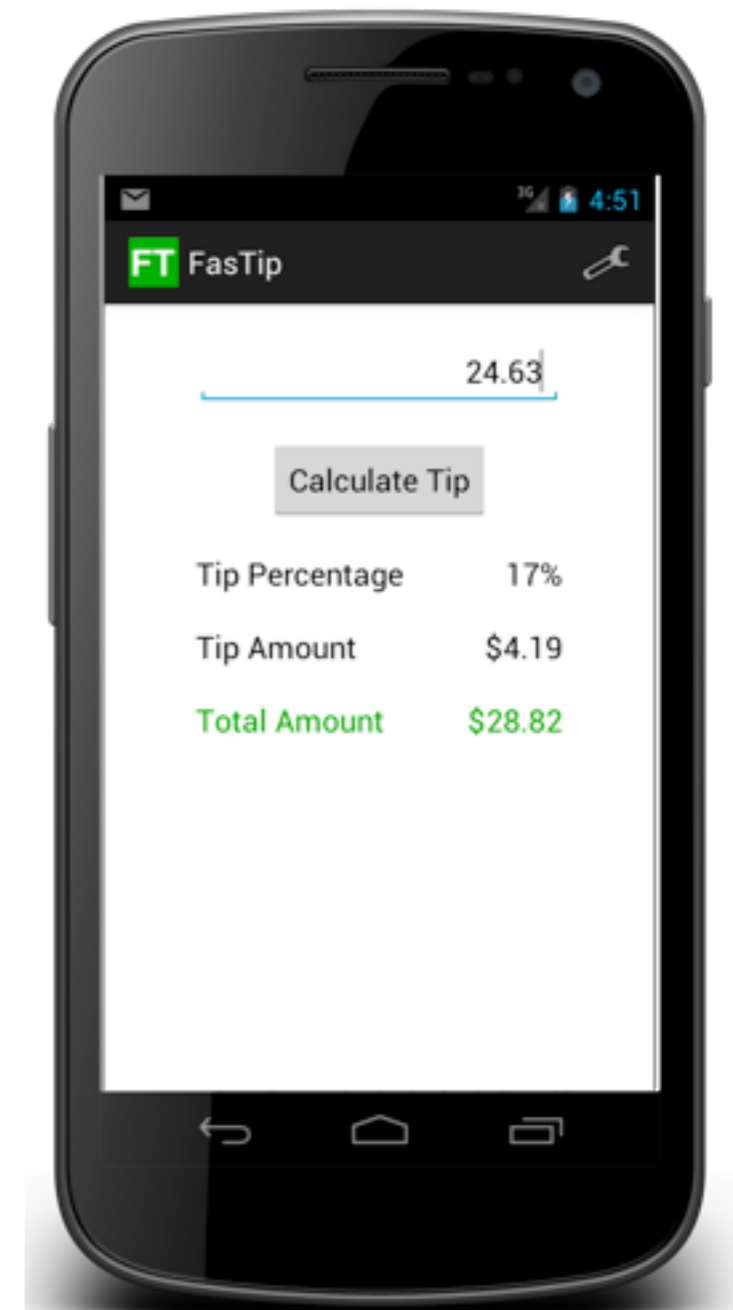Java

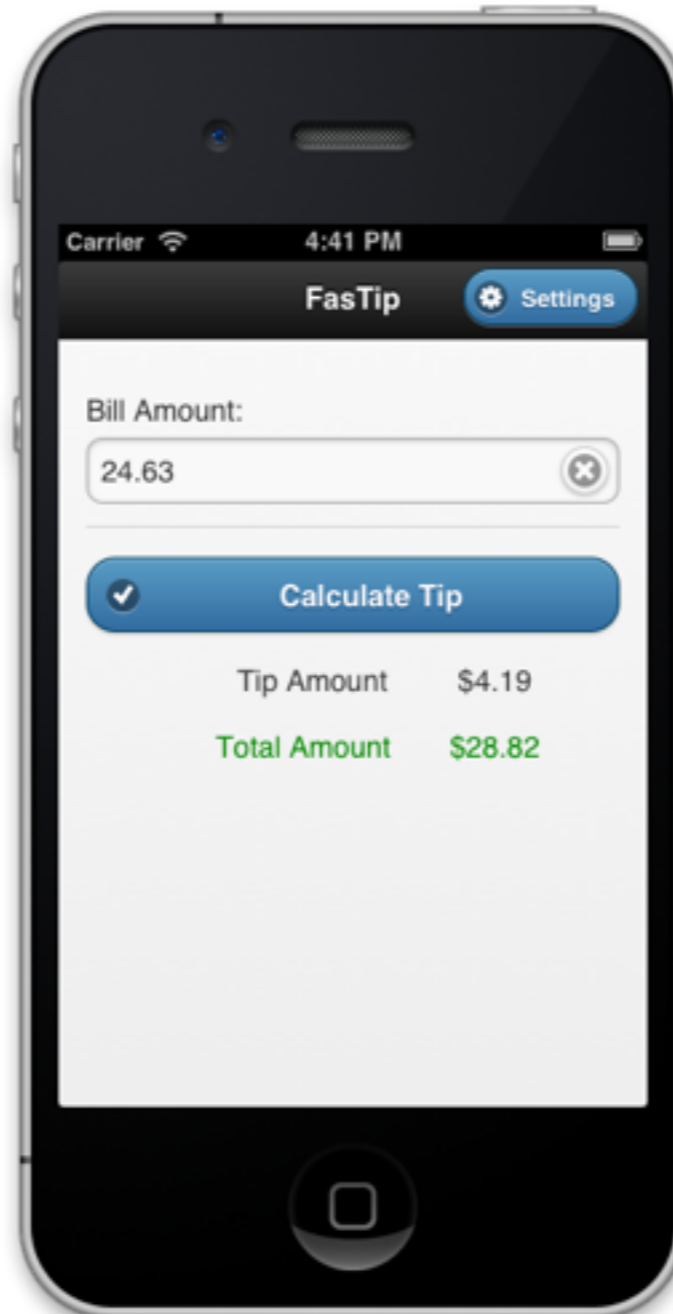Native

Storyboard

Javascript

Activity

X-Code

CSS

Hybrid
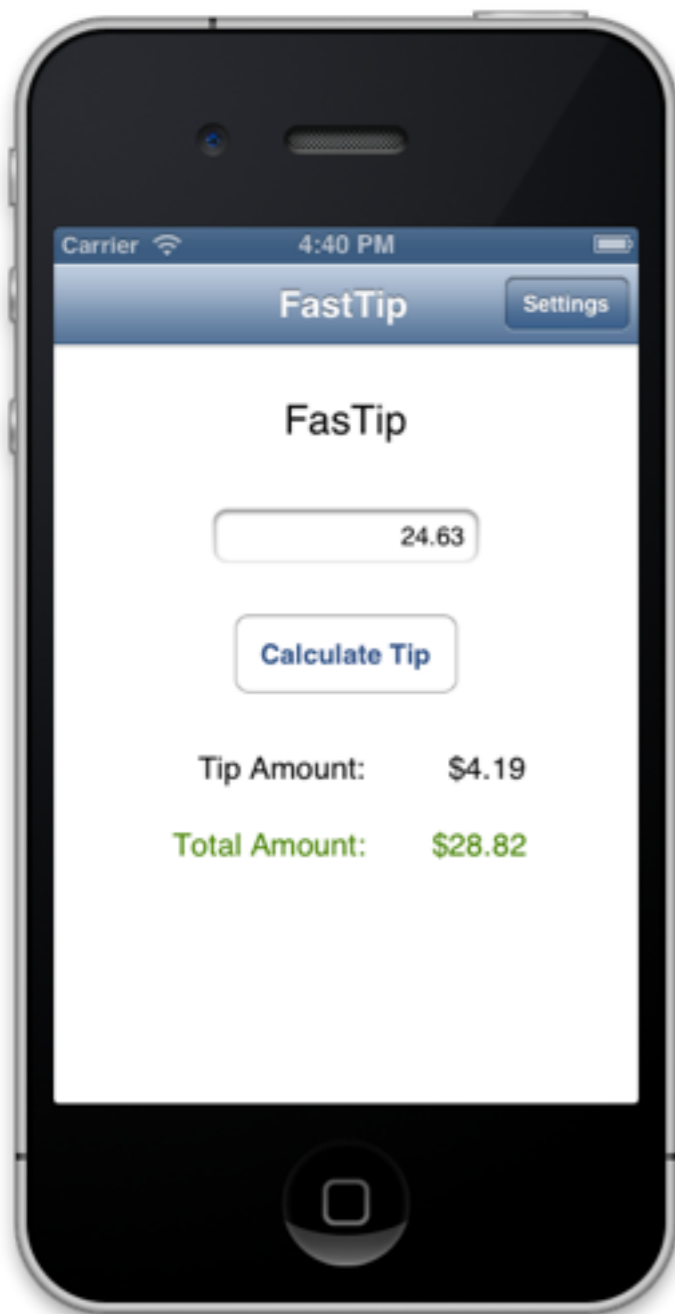
Build in the cloud

Titanium Studio

Demonstration App ...

iOS Native Development

Language: Objective-C

Dev Tools:
- X-Code
- iOS SDK

- Requires Mac OSX
- Dev Tools are free of charge
- $99/yr developer fee to test on devices and submit to the Apple AppStore

Tour of iOS Native Development

- X-Code

- ViewController

- NavigationController

- Storyboards

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iOS Learning Resources

- <u>iOS Programming: The Big Nerd Ranch Guide</u> - Conway/Hillegass

- <u>Objective-C Programming: The Big Nerd Ranch Guide</u> - Hillegass

- <u>Stanford University iOS Course on iTunes</u>

- <u>WWDC Videos</u>

- <u>Ray Wenderlich.com</u> - iOS Tutorials

Android Native Development

Language: Java

Dev Tools:
- Eclipse
- Eclipse ADT Plug-In
- Android Studio
- Android SDK

- Works on Mac, Windows, or Linux
- One time $25 fee to distribute apps on Google Play.

Tour of Android Native Development

- Eclipse

- Android Development Tools

- Activities / Intents

- Android Support Library

- XML Based layouts

- Android <u>resource system</u>

Android Learning Resources

- <u>Busy Coder's Guide To Android Development</u> - Mark Murphy, CommonsWare

- <u>Beginning Android 4 Application Development</u> - Lee

- <u>Vogella.com</u> - Android Tutorials

PhoneGap Development

- Cross Device Support

- User interface written in HTML / CSS / JS

- Supports:
    - iOS
    - Android
    - Windows 8
    - Windows Phone 7 & 8
    - Blackberry 5.x+
    - WebOS
    - Symbian
   - Samsung Bada

Phone**Gap**

Adobe PhoneGap / Apache Cordova

- Apache Cordova: The open source platform
- Adobe PhoneGap: An Adobe branded product of Cordova

- PhoneGap <u>core capabilities</u>:
  - Accelerometer
  - Camera
  - Contacts
  - File System
  - Media playback & recording
  - Network availability

- Think of PhoneGap as non-visual components. You still need visual components created in HTML/CSS as any mobile web application would.

PhoneGap Plugins

- Extending your solution when Javascript and the base PhoneGap functionality don't meet your needs.

- Large repository of existing plugins:
  - Barcode Scanning
  - Bluetooth
  - Push Notifications
  - Text to Speech
  - Calendars
  - Facebook Connect

- You can write your own
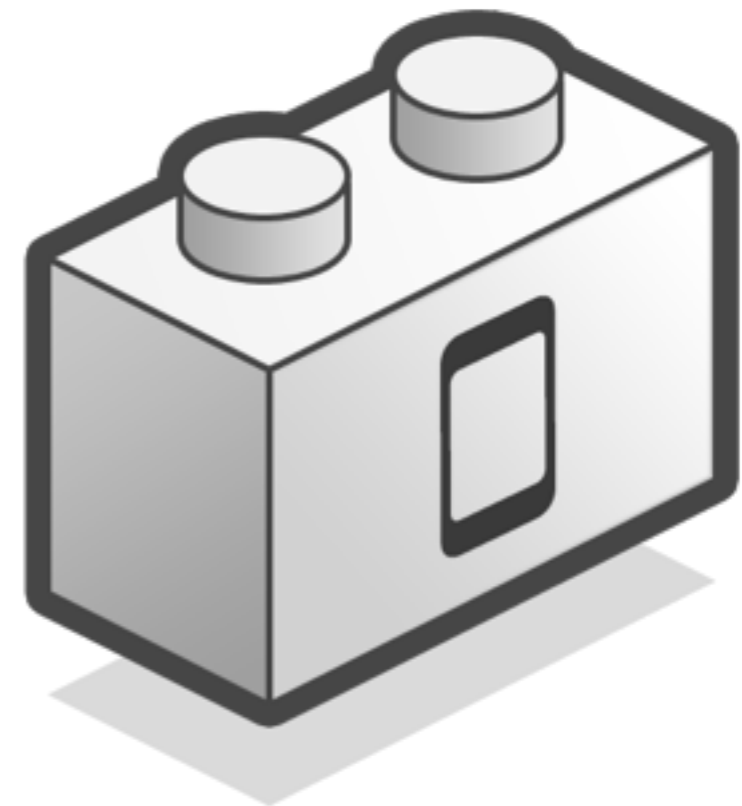
UX Frameworks for PhoneGap Applications

- jQuery Mobile

- Sencha Touch

- Kendo UI

- Enyo

PhoneGap Development

Language: Javascript

Dev Tools: • HTML/JS editor (eg: WebStorm)
            • SDKs for platforms you want to support
            • Debugging tools (eg: Ripple, Weinre, Safari - see PhoneGap Wiki)

PhoneGap

• Works on Mac, Windows, or Linux
• Free of charge
• Still must pay platform AppStore fees and follow processes to submit to the platform's AppStore just like with native development.

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PhoneGap In The Cloud

- Build applications in the cloud

- Doesn't require SDKs installed on the development machine

- App under development can pull new Javascript/HTML/CSS from the build server without directly updating the app - Hydration.
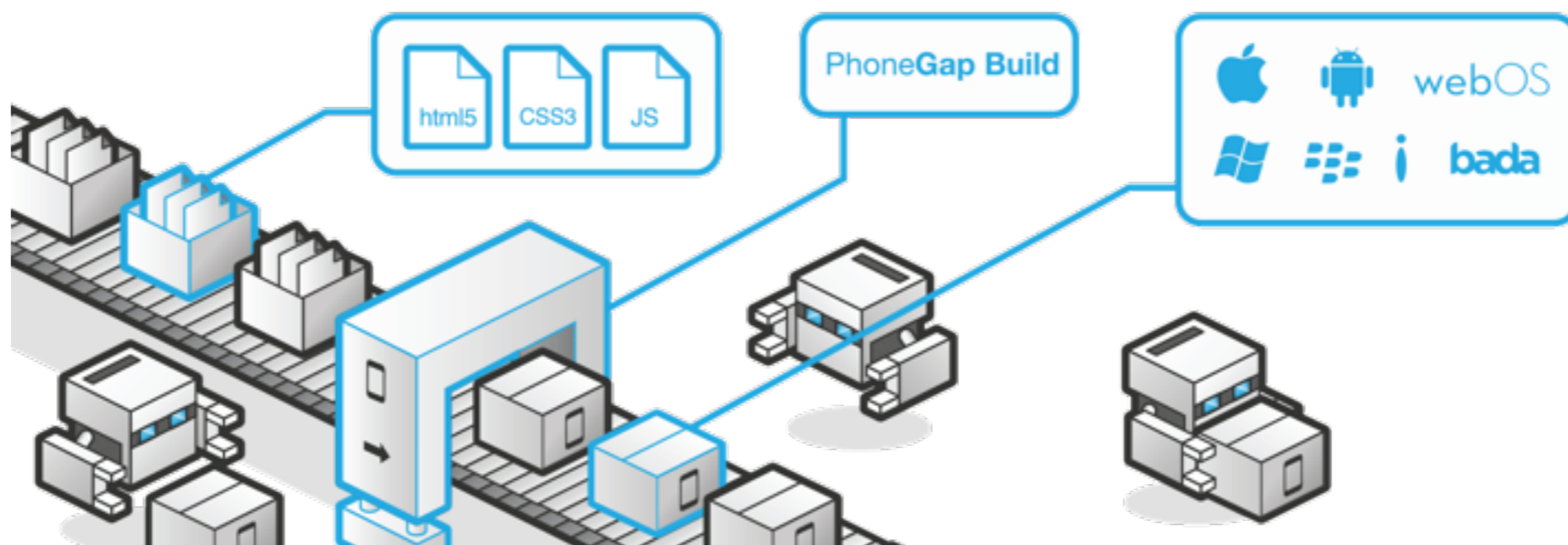
PhoneGap In The Cloud

- **PhoneGap Build**
  - Free for one app, $9.99/mo for up to 25 apps
  - Push code to PhoneGap by uploading it as a ZIP file, via GIT integration, or through the PhoneGap CLI in PhoneGap 3.
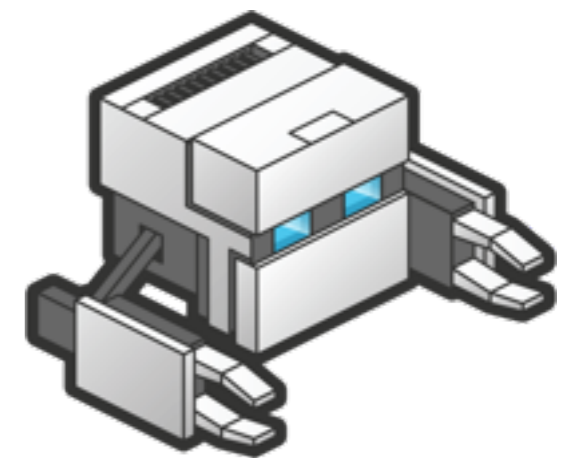
- **ICENIUM**
  - Cloud hosted IDE with cloud build as well
  - Just hit 'save' in the IDE and your app is rebuilt on the server.
  - Cost $19/mo

PhoneGap Learning Resources

PhoneGap

- Requires a good foundation in HTML, CSS, and Javascript

- <u>Getting Started Guides</u>

- <u>Appliness</u> - free monthly digital magazine

- Blogs - <u>Andrew Trice</u>, <u>Christophe Conraets</u>, <u>Ray Camden</u>

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Appcelerator Development

- Cross device development:
  - iOS
  - Android
  - Blackberry
  - Tizen

- Coming soon:
  - Windows Phone

- Uses native controls instead of HTML5

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Appcelerator Development

Language: Javascript

Dev Tools: • Titanium Studio
               • Platform SDKs

               • Works on Mac, Windows, or Linux
               • Tools are free. Support packages are
                 available at additional cost.

Tour of Appcelerator Development

- Titanium Studio

- Alloy Framework

- May need to handle iOS and Android views differently

- Deployed .IPA and .APK files will be larger than most PhoneGap or native apps.

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Appcelerator Learning Resources

appcelerator®

titanium™

- <u>Video</u> and <u>Tutorials</u> on the Appcelerator Site

- Many of the books available offer little more than can be found with the above resources.

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Conclusion:

Mobile App Development

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Thank You !