Hybrid apps are essentially small websites running in a browser shell in an app that have access to the native platform layer

# Reactive Native

Install android SDK

(<http://facebook.github.io/react-native/docs/android-setup.html#content>

Android SDK Build-tools version 23.0.1

Android 6.0 (API 23)

Android Support Repository)

Install npm > 4.0

>npm install –g react-native-cli

>react-native init AwesomeProject

(note: fails to connect to git://github.com

>git config –global url.<https://github.com/>.insteadOf [git@github.com](mailto:git@github.com)

>git config –global url.https://.insteadOf git://

Current progress requires several minutes)

# Ionic

Ionic comes with very native-styled mobile UI elements and layouts that you’d get with a native SDK on iOS or Android but didn’t really exist before on the web

Since Ionic is an HTML5 framework, it needs a native wrapper like Cordova or PhoneGap in order to run as a native app

Ionic apps aren’t meant to be run in a mobile browser app like Chrome or Safari, but rather the low-level browser shell like iOS’s UIWebView or Android’s WebView, which are wrapped by tools like Cordova/PhoneGap.

Eager developers might also dig down into the native layer with custom Cordova plugins or native code

Ionic targets iPhone and Android devices (currently). We support iOS 6+, and Android 4.0+ (though 2.3 should work).

//installation

**>npm install –g cordova ionic**

//project template

**Project Parent> ionic start myApp tabs**

(or ionic start myApp blank, ionic start myApp sidemenu)

//build via android or ios

**myApp> ionic platform add android**

**myApp> ionic build android**

//test

**myApp> ionic emulate android // testing in simulator**

(or substitute android with ios to build for ios)

Note: 若emulate失败，可以将myApp\platforms\android\build\outputs\apk\android-debug.apk拷到mobile device安装测试

**myApp> ionic serve //testing in a browser**

//publish

myApp> cordova plugin rm cordova-plugin-console // disenable the debug console plugin

//generate our private key

>keytool -genkey -v -keystore **my-release-key.keystore** -alias alias\_name -keyalg RSA -keysize 2048 -validity 10000

//sign the unsigned APK

>jarsigner -verbose -sigalg SHA1withRSA -digestalg SHA1 -keystore **my-release-key.keystore** **HelloWorld-release-unsigned.apk** alias\_name

//optimize the APK

>zipalign -v 4 HelloWorld-release-unsigned.apk HelloWorld.apk

Yeoman: node必须是最新版

>npm install –g generator-ionic

(如果有错误，类似operaton not permitted, rename ‘…\npm-cache\...’, 要先清空

>npm cache clean)

>mkdir my-ionic-project && cd $\_

my-ionic-project>yo ionic

Ionic

Ionic is a bunch of UI elements made in HTML5 &

CSS3 that covers a lot of the mobile interactions

The big advantage of Ionic is all the UI components

are AngularJS Directives

Open-source

• Built with Sass and optimized for AngularJS

• Beautifully designed

• Extends the HTML vocabulary

• UI Components using Directives and Services

• Proven for large-scale app development

• Ionicons (over 700 MIT licensed font-icons)

• Supported by Drifty and has a large community:

• Very active internal forum

Hybrid Apps

• HTML 5 that acts like native

• Web wrapper in native layer

• Direct access to native APIs

• A single code base

• Familiar web development environment

A lot of components

Swipeable List Options

• Side menus

• Actionsheets

• Tabs

• Pull to Refresh

• Slidebox

• Infinite Scroll

• Popup

• Popover

• Loading Overlay

• Inputs

• Buttons

Cached Views

View elements left in DOM

• $scope disconnected from cache

• State maintained

• Scroll position maintained

• Life Cycle events

• Highly configurable

Collection-Repeat

Replacement for ng-repeat

• Scroll through thousands of items

• Only renders the viewable items

• Smooth scrolling

Ionic-Cli

Testing in a browser

• Live Reload App During Development

• Emulating your app

• Running your app on device

• Building your app (with or without SDK)

• Icon and Splash Screen Image Generation

• Crosswalk for Android

ngCordova:CORDOVA WITH THE POWER OF ANGULARJS

ngCordova is a collection of 63+ AngularJS extensions on

top of the Cordova API that make it easy to build, test, and

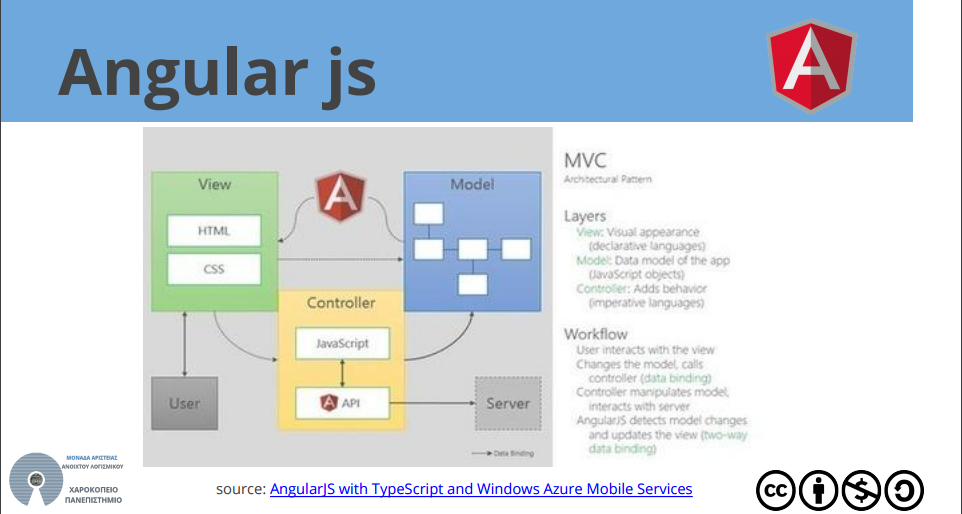
deploy Cordova mobile apps with AngularJS.

Apache Cordova

● Set of device APIs that allow a mobile app

developer to access native device function such as

the camera or accelerometer from JavaScript.



# PhoneGap

Apache Cordova is the engine that powers Adobe PhoneGap™, similar to how WebKit powers Chrome or Safari. However, Adobe PhoneGap™ provides additional tools that tie into other Adobe services, including tools like the PhoneGap Developer App, the PhoneGap Desktop App, PhoneGap Build and PhoneGap Enterprise.

Install PhoneGap desktop app ->computer

Install PhoneGap Developer App ->mobile device

是在移动设备上调试 PhoneGap 应用的工具，不需要每次打包、安装就可以直接在手机上调试 PhoneGap 应用

PhoneGap Desktop starts a small web server to host your project and returns a server address you can then enter into the PhoneGap Developer app running on your mobile device.