



IONIC

The Missing SDK For Hybrid Apps

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"Say, Johnny, I got this great idea for an app."

-EVERY DEVELOPER IN THE HISTORY OF DEVELOPMENT

CHALLENGES OF NATIVE DEVELOPMENT

Proficiency in each platform required

Entirely separate code bases

Timely & expensive development

Diminishing returns

MORE PLATFORMS, MORE CHALLENGES.







ANY ALTERNATIVES?



Hybrid Apps: HTML5 that acts like native

Direct access to native APIs

Develop a single code base (web platform)

Write once, Run anywhere



Turns Out, Yes You Can

WHAT THEY DON'T TELL YOU

No UI - Bring your own UI

No JS Framework

Old Android is not a nice place to work

No transitions, gesture support, navigation stack

MORE ON CORDOVA LATER.... LET'S LOOK AT THIS ANGULAR THING

ANGULAR



Reusable components through Directives

Two Way Data Binding

Hello World in Angular

MODEL

Factory

```
.factory('Speakers', function($http) {
    return {
        getSpeakers: function() {
            return $http({
                url: 'https://data.com/speakers.json',
                 method: 'GET'
            })
        }
    }
}
```

Controller

```
.controller('MainCtrl', function($scope, Speakers) {
   $scope.speakers = [];

Speakers.getSpeakers().success(function(data) {
   $scope.speakers = data;
  });
});
```

VIEW

A single html page that gets populated by a controller

No application logic, just visuals here

ng-controller? ng-repeat?

What are these curly braces?

```
<div ng-controller="MainCtrl">
  <div ng-repeat="speaker in speakers">
     <div>
      {{speaker.firstName}}
     {{speaker.lastName}}
     </div>
     <div>
       {{speaker.bio}}
     </div>
   </div>
</div>
```

STATES

Manage application states/views and provides templates, controllers, urls

```
.config(function($stateProvider, $urlRouterProvider) {
 $stateProvider
    .state('signin', {
     url: '/sign-in',
      templateUrl: 'templates/sign-in.html',
      controller: 'SignInCtrl'
   })
    .state('forgotpassword', {
     url: '/forgot-password',
      templateUrl: 'templates/forgot-password.html'
   })
  $urlRouterProvider.otherwise('/sign-in');
})
```

DIRECTIVES

```
.directive('blink', function() {
  return {
    restrict: 'E',
    link: function($scope, $element, $attribute) {
      function showElement() {
        $element.css("visibility", "visible");
        setTimeout(hideElement, 1000);
      function hideElement() {
        $element.css("visibility", "hidden");
        setTimeout(showElement, 1000);
      showElement();
```

<bli><blink>Hello World</blink>

WHAT THEY DON'T TELL YOU

No UI - Bring your own UI

Ng-Repeat is a Double-edged Sword

Bit of a learning curve

THE BEST OF BOTH WORLDS

Cordova

Angular JS

Create cross platform mobile apps

Create scalable web apps

No JS framework

Structured JS framework

Started around 2009

Started around 2009

Animations

Modals

ActionSheets

Gestures

Lists

Buttons

Tabs

Navigation

Scrolling

NATIVE APP

Native **SDK**

THERE IS NO MALE IS NO SIGNATURE IS NO SIGNATU

WebView

NATIVE APP

Cordova/PhoneGap

WHAT DO WE NEED NOW

A bridge between web and native

Rich, native-style UI components

Gestures, Transitions, Navigation Stacks

UI APIs, not just jQuery widgets



Howdy

"Focus on building your app. Not on how your app should work"

WEB TECHNOLOGIES YOU ALREADY KNOW AND LOVE







STANDING ON THE SHOULDERS OF ANGULAR

Proven for large-scale web app development

Extends the HTML vocabulary

UI Components using Directives and Services



CSS generated from the Sass preprocessor

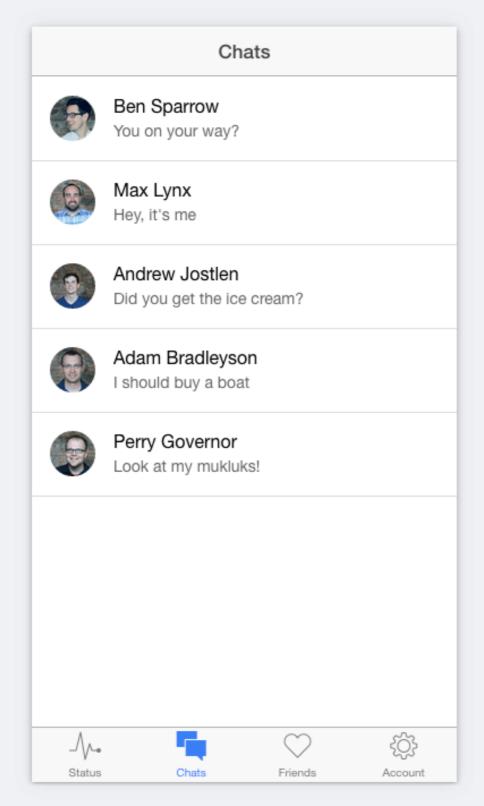
Quickly give your app its own look and feel

CSS designed to be easily overridden

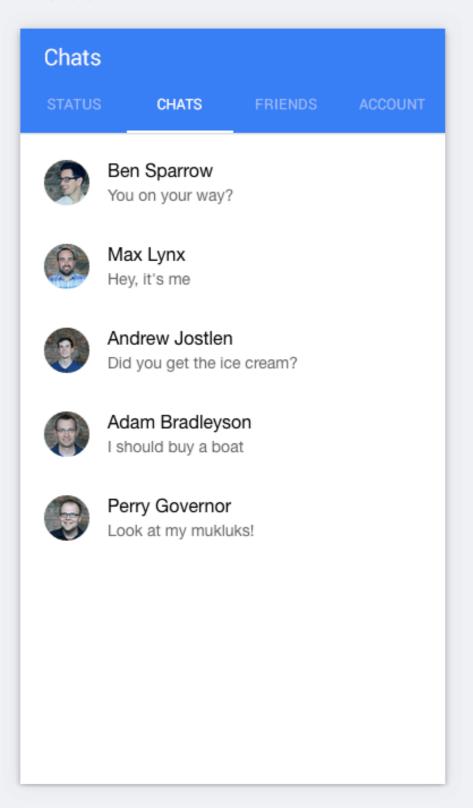
Variables based with default settings

PLATFORM CONTINUITY

iOS



Android



How It All Comes Together

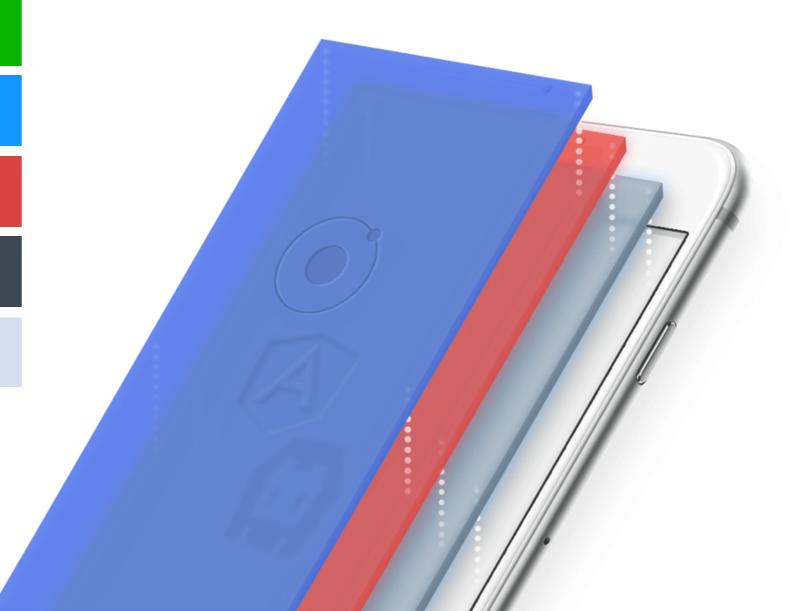
Your App

Ionic

Angular

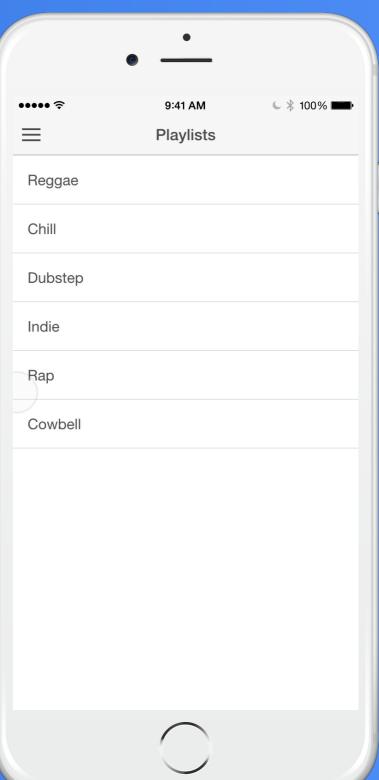
WebView (Cordova)

Native App



SIDE MENUS

```
<ion-side-menus>
  <!-- Left menu -->
  <ion-side-menu side="left">
  </ion-side-menu>
  <!-- Center content -->
  <ion-side-menu-content>
  <ion-nav-view></ion-nav-view>
  </ion-side-menu-content>
  <!-- Right menu -->
  <ion-side-menu side="right">
  </ion-side-menu>
</ion-side-menus>
```



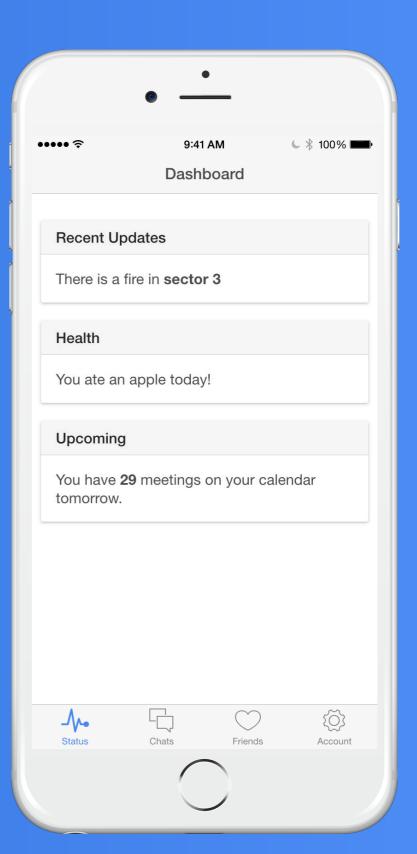
TABS

Nested views

Each tab has its own nav history

Abstract states in AngularUI Router

```
<ion-tabs class="tabs-icon-top">
    <ion-tab icon="ion-home">
     <ion-nav-view name="home-tab">
      </ion-nav-view>
      </ion-tab>
</ion-tabs>
```

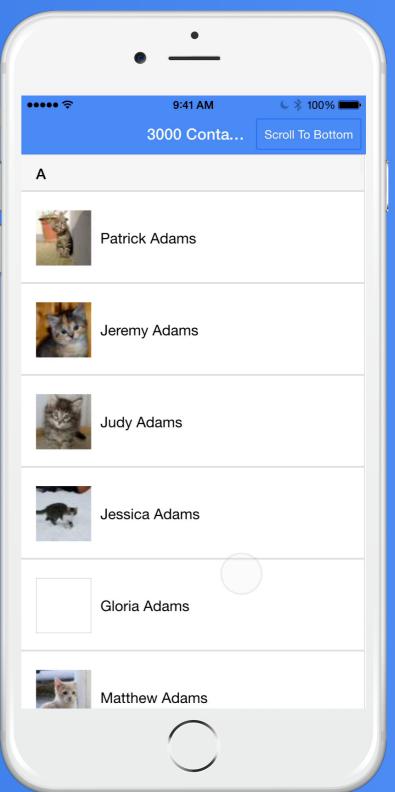


COLLECTION REPEAT

Replacement for ng-repeat

Inspired by iOS's UICollectionView

Only renders the viewable items



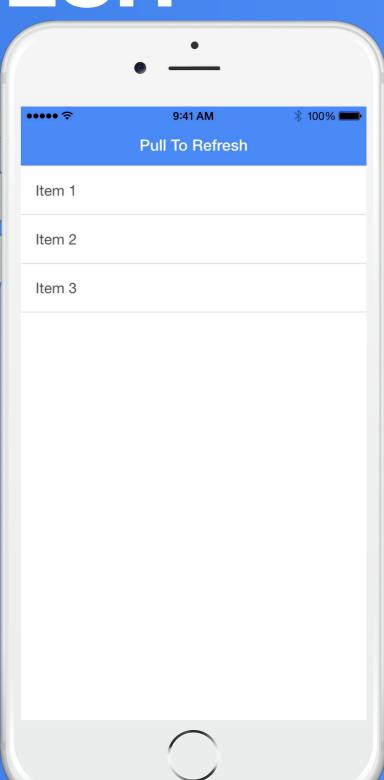
PULL TO REFRESH

Common design pattern to fetch data

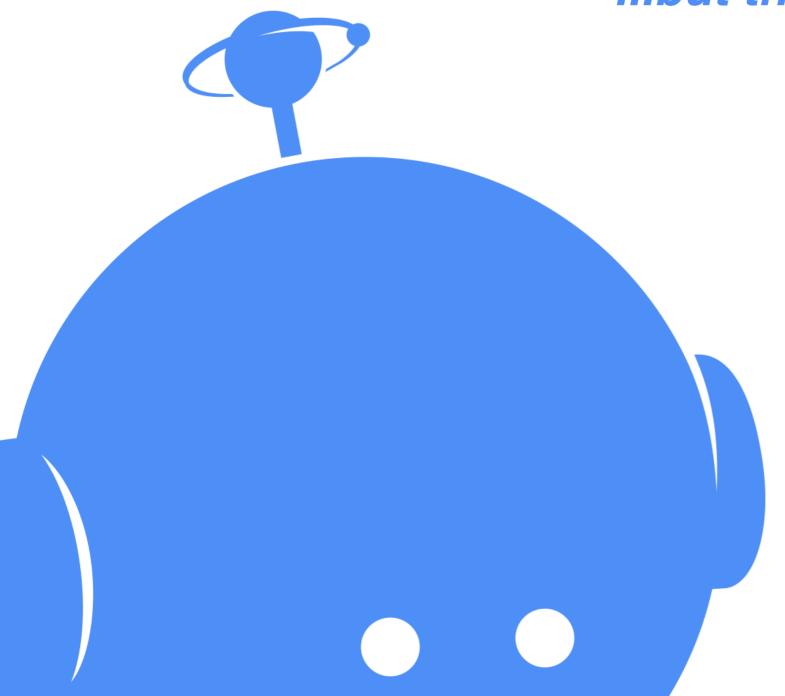
Takes a simple function

Customize loading text and icon

```
<ion-content>
    <ion-refresher on-refresh="fetchMore()">
        </ion-refresher>
        <ion-list>
            <ion-item></ion-item>
        </ion-content>
```



...but there's more to lonic



npm install -g ionic cordova

```
$ ionic start myApp
Creating myApp... done

Your app is ready to go!
```

Starter projects ready for customization

LiveReload both local and native builds

Build and run native apps

MODERN CHROMIUM!

Chromium for Android WebViews

Upgrade Android 4.0+ and above

Same hardware, modern software

Amazing performance improvements



60+ AngularJS extensions on top of the Cordova API





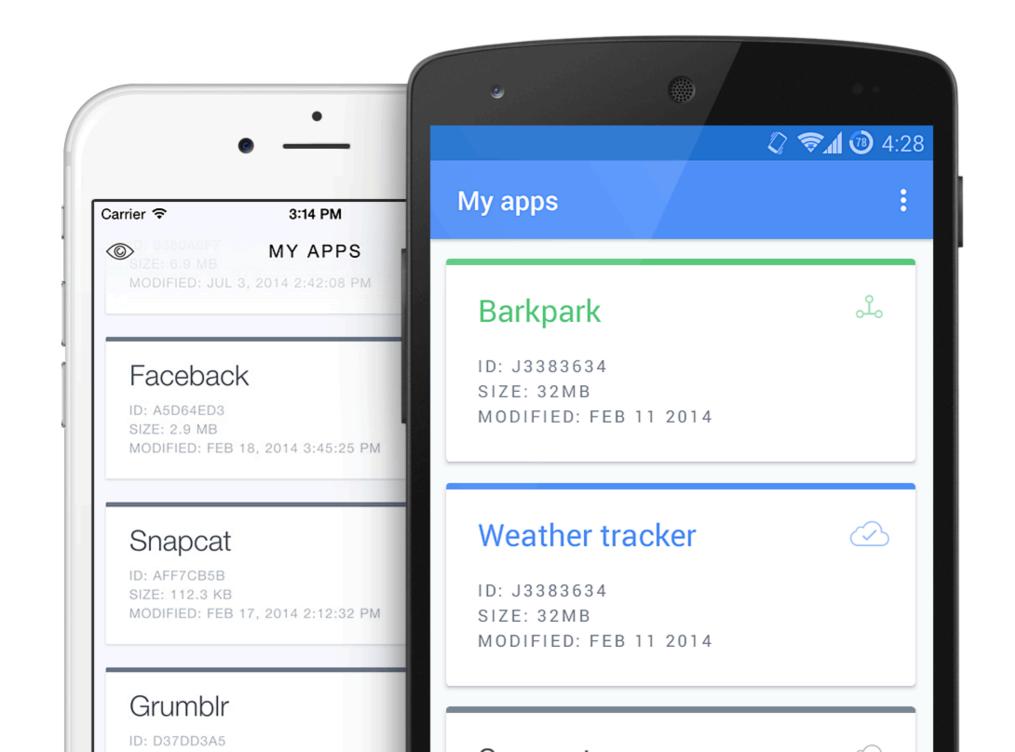




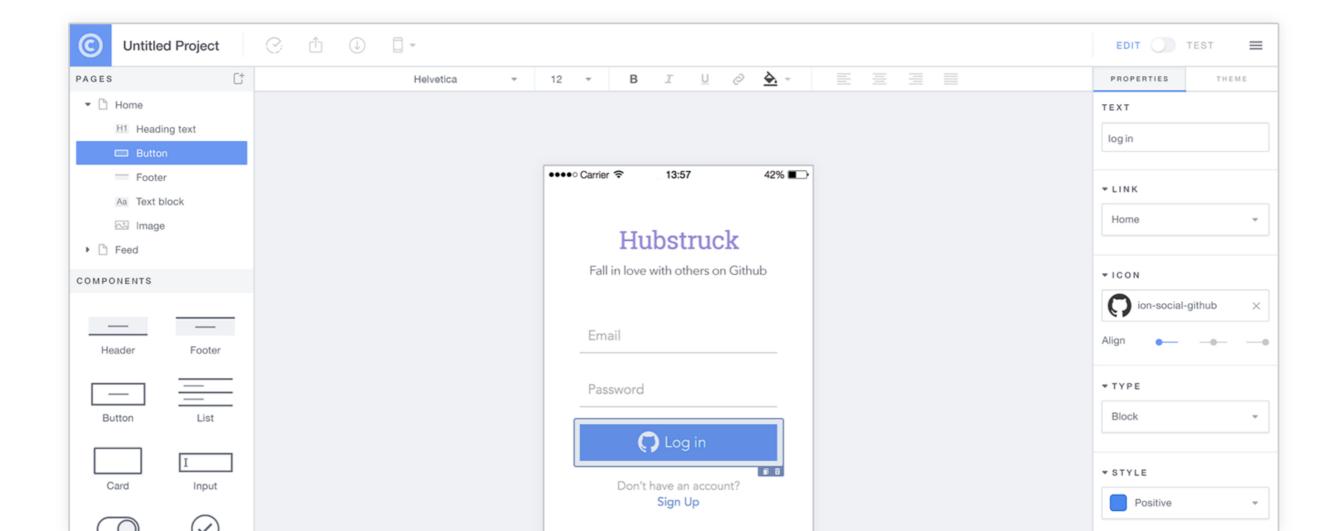
ionicpush ionicanalytics ionicupdate ionictest ionicpackage



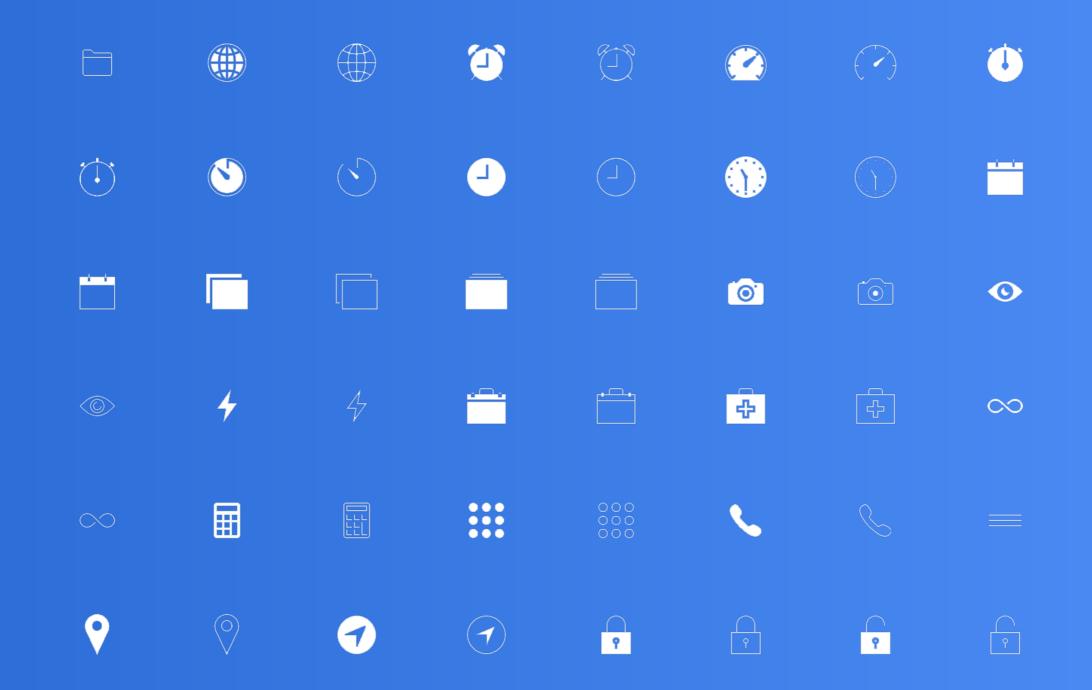












DID I MENTION ICONS?

<u>Ionicons</u>

Over 700 MIT licensed font-icons included

- ionic start

DEMO TIME!

MAY THE DEMO GODS BE WITH US

GETTING STARTED

Christophe Coenraets Cordova tutorial

Dan Wahlin's Angular in 60-ish minutes

Ionic in Action Book

Ionic Forum

ANGULAR 2?

NG-Conf 2015 | Angular 2 & TypeScript

New syntax and much more power

Incredible Fast

New Router





</HTML>

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https://github.com/mhartington/PhillyETE