





# IONIC

## The Missing SDK For Hybrid Apps

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# OVERVIEW

Hybrid Apps from a high level

The Angular Framework Crash Course

Ionic - Making Hybrid Apps Beautiful

Demo of an Ionic App

# WHAT YOU SHOULD KNOW

Javascript

Working in a terminal

NodeJs

Angular is a plus

Mobile development concepts

A TALK IN THREE PARTS

**“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

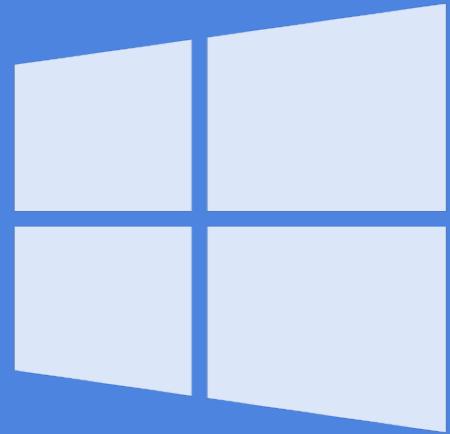
# MORE PLATFORMS, MORE CHALLENGES.



Obj-C/Swift



Java



C#/.NET

# ANY ALTERNATIVES?



APACHE  
**CORDOVA**™

Hybrid Apps: HTML5 that acts like native

Web wrapped in native layer

Direct access to native APIs

Develop a single code base (web platform)

**Write once, Run anywhere**

A photograph of Aragorn from the Lord of the Rings movies. He has long brown hair and a beard, wearing a dark leather jacket over a red tunic. He is gesturing with his right hand while speaking. The background is a stone wall with warm lighting.

**ONE DOES NOT SIMPLY**

**WRITE ONCE, RUN ANYWHERE**

# SUPPORT FOR CORDOVA

Folks like Google, Adobe, IBM, Mozilla,  
Microsoft, Amazon - all supporters of Cordova



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



MVW Architecture

Reusable components through Directives

Two Way Data Binding

# MODEL

# 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>
```

Hello World in Angular

# 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

Reusable custom element

Predefined functionality

HOW DOES THIS ALL  
COME TOGETHER?

WHAT THEY DON'T  
TELL YOU

No UI - Bring your own UI

Angular likes to be in control

Ng-Repeat is a Double-edged Sword

You have to think Angular

Bit of a learning curve

LET'S TAKE A STEP  
BACK...



# 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



Enter Ionic

**“The beautiful, open source SDK for  
developing hybrid mobile apps with HTML5.”**

# WEB TECHNOLOGIES YOU ALREADY KNOW AND LOVE

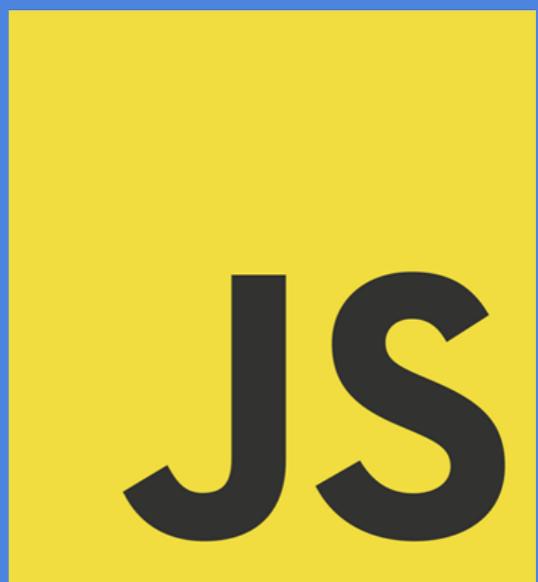
HTML



CSS



JS



# STANDING ON THE SHOULDERS OF ANGULAR



Proven for large-scale web app development

Extends the HTML vocabulary

UI Components using Directives and Services

# NATIVE FOCUSED



Modeled off of native SDKs

Built to work with Cordova

# WRITTEN WITH



Preprocessor for CSS

Designed to be easily overridden

Variables for quick changes

80+ reusable mixins



Starter templates

Gulp, Sass, Bower Build Tool

LiveReload

Update JS files

Build and run native apps

```
$ npm install -g ionic cordova gulp bower
```

```
$ ionic start myapp sidemenu
```

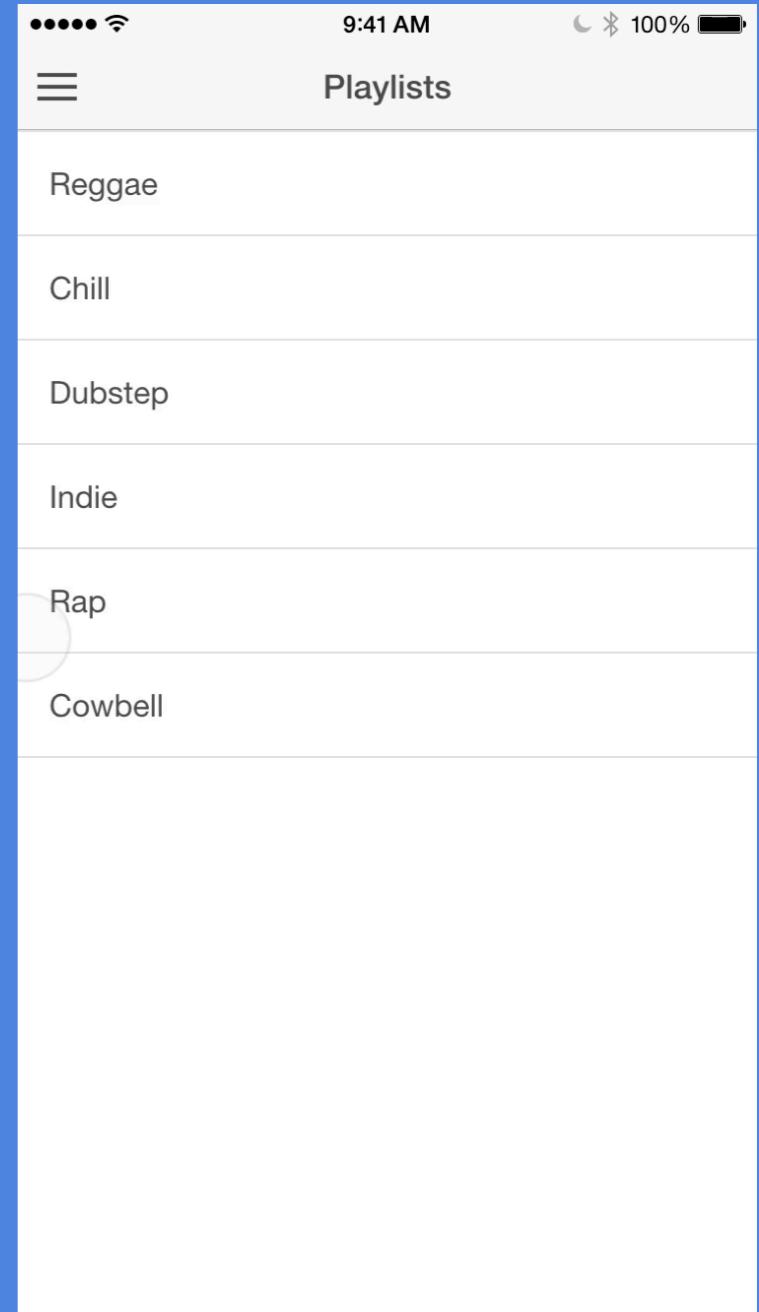
```
$ cd myapp
```

```
$ ionic serve
```

# IONIC COMPONENTS

# 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>
```



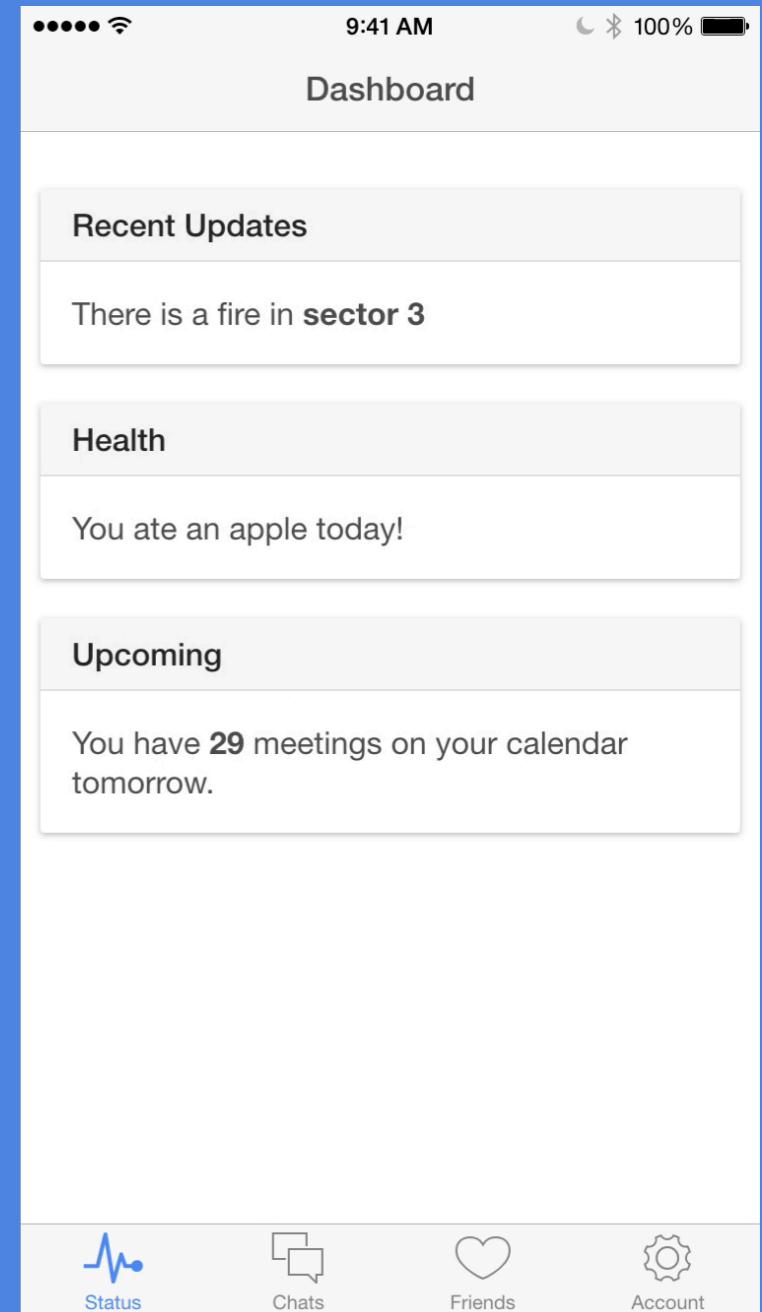
# TABS

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>
```



# LISTS

```
<ion-content>
<ion-list>

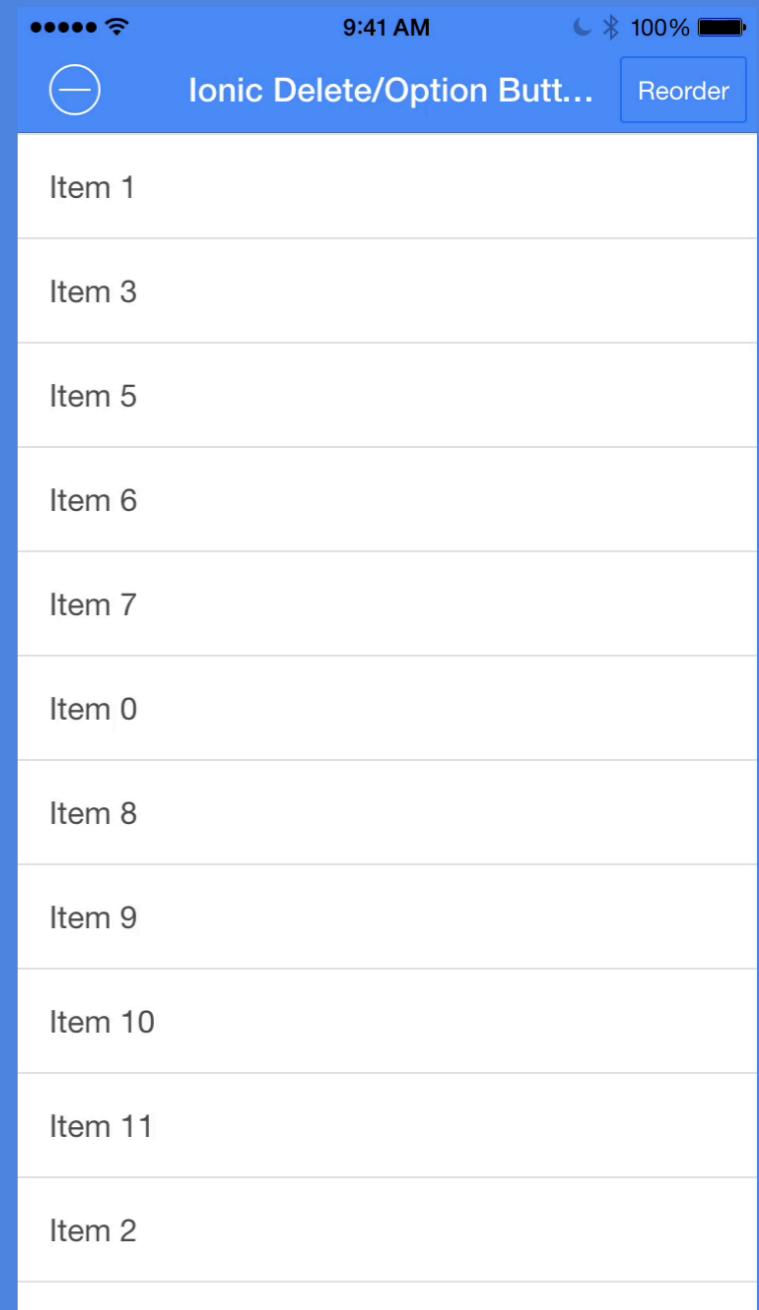
  <ion-item>
    Item

    <ion-delete-button>
    </ion-delete-button>

    <ion-option-button>
    </ion-option-button>

    <ion-reorder-button>
    </ion-reorder-button>
  </ion-item>

</ion-list>
</ion-content>
```



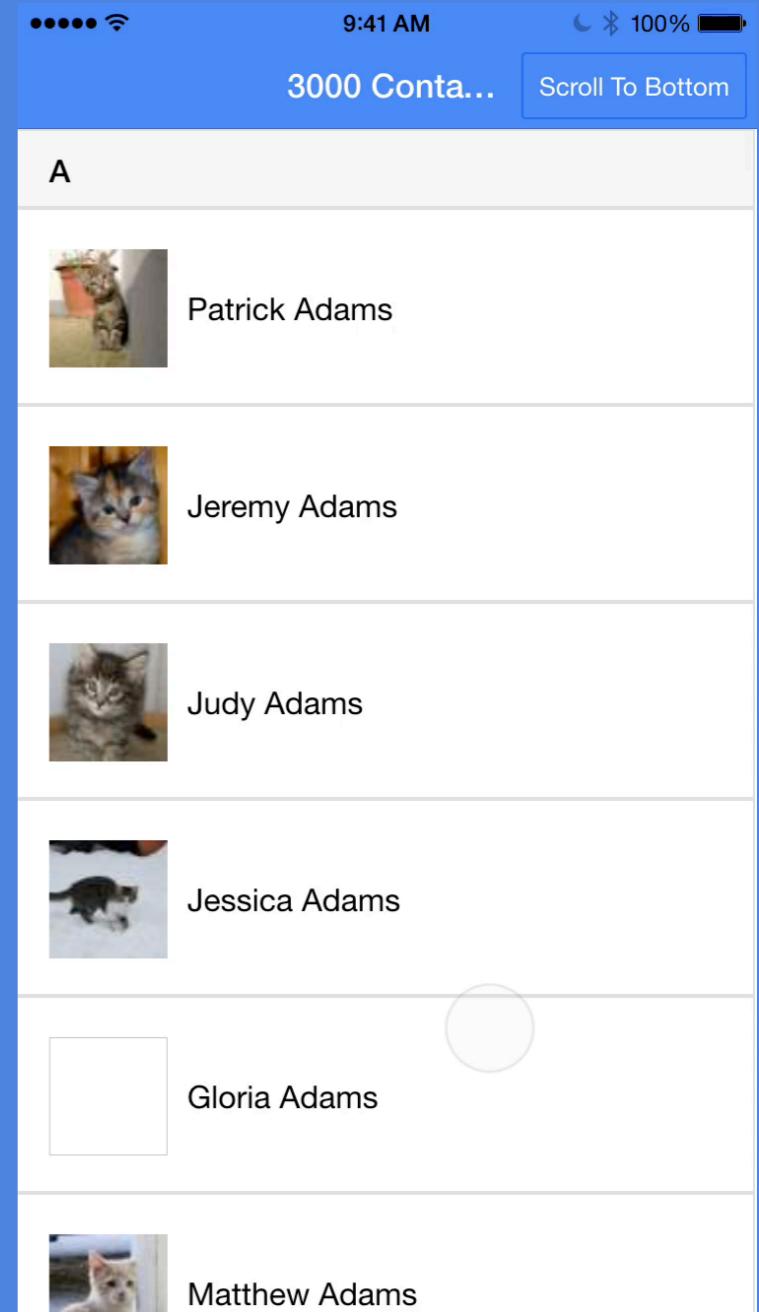
# COLLECTION REPEAT

Replacement for ng-repeat

Inspired by iOS's UICollectionView

Only renders the viewable items

```
<ion-content>
<div class="list">
<a class="item"
    collection-repeat="item in items">
    {{item.name}}
</a>
</div>
</ion-content>
```

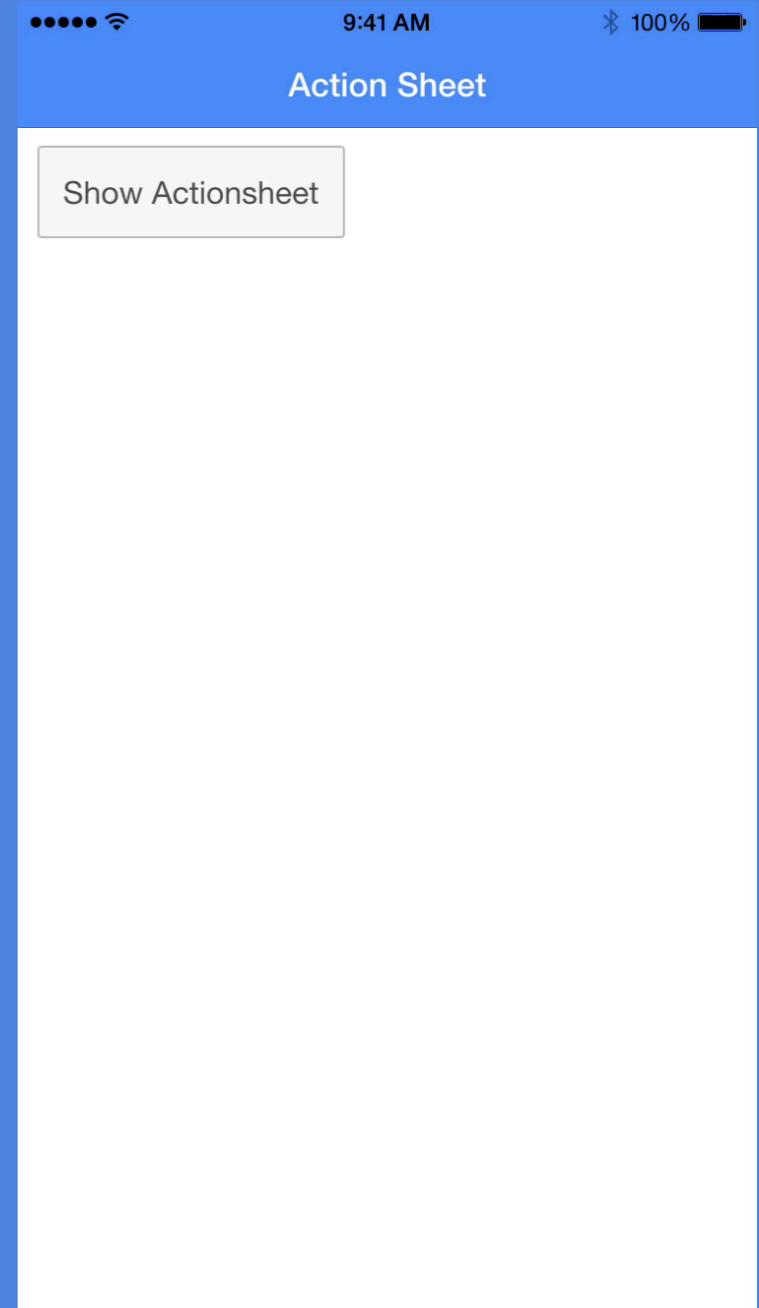


# ACTION SHEET

Angular Service

Inject into controllers

```
$ionicActionSheet.show({  
  titleText: 'Action Sheet Example',  
  buttons: [  
    { text: 'Share' },  
    { text: 'Move' },  
  ],  
  destructiveText: 'Delete',  
  cancelText: 'Cancel',  
  buttonClicked: function(index) {  
    console.log('BUTTON CLICKED', index);  
    return true;  
  }  
});
```



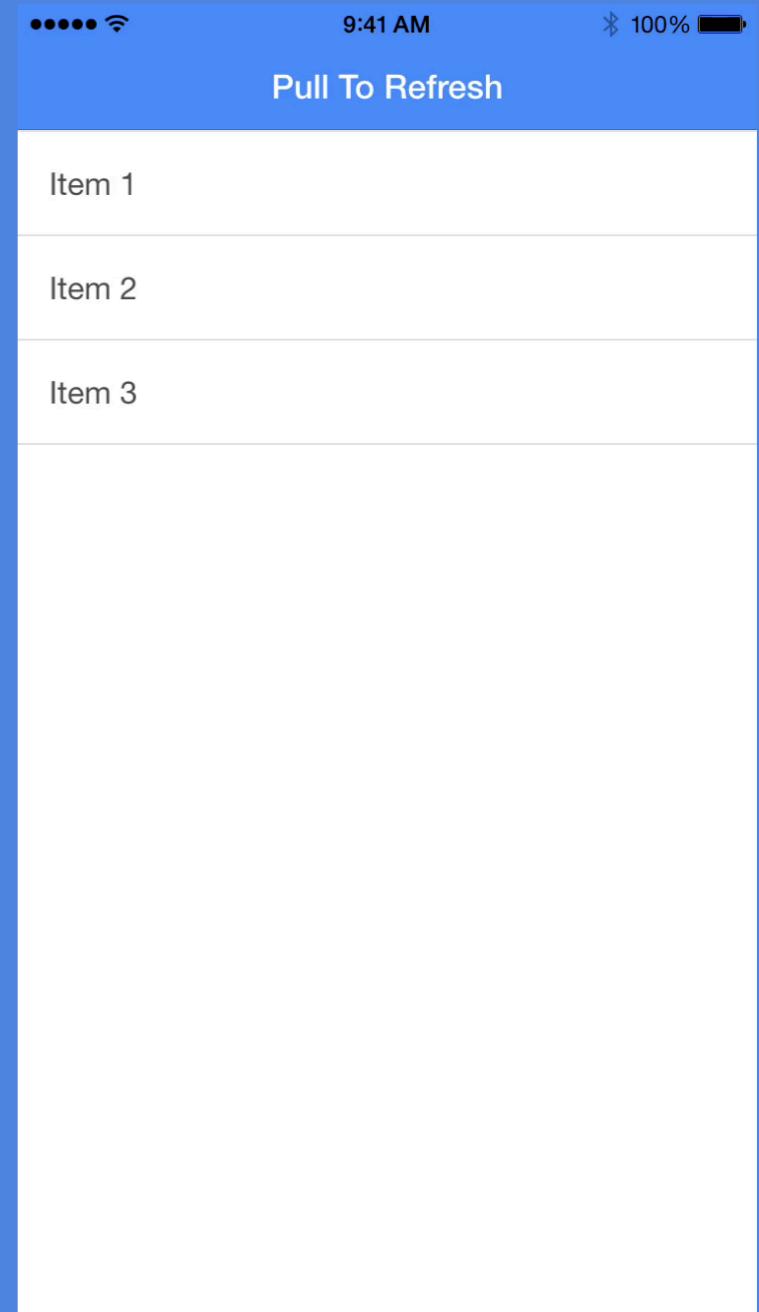
# PULL TO REFRESH

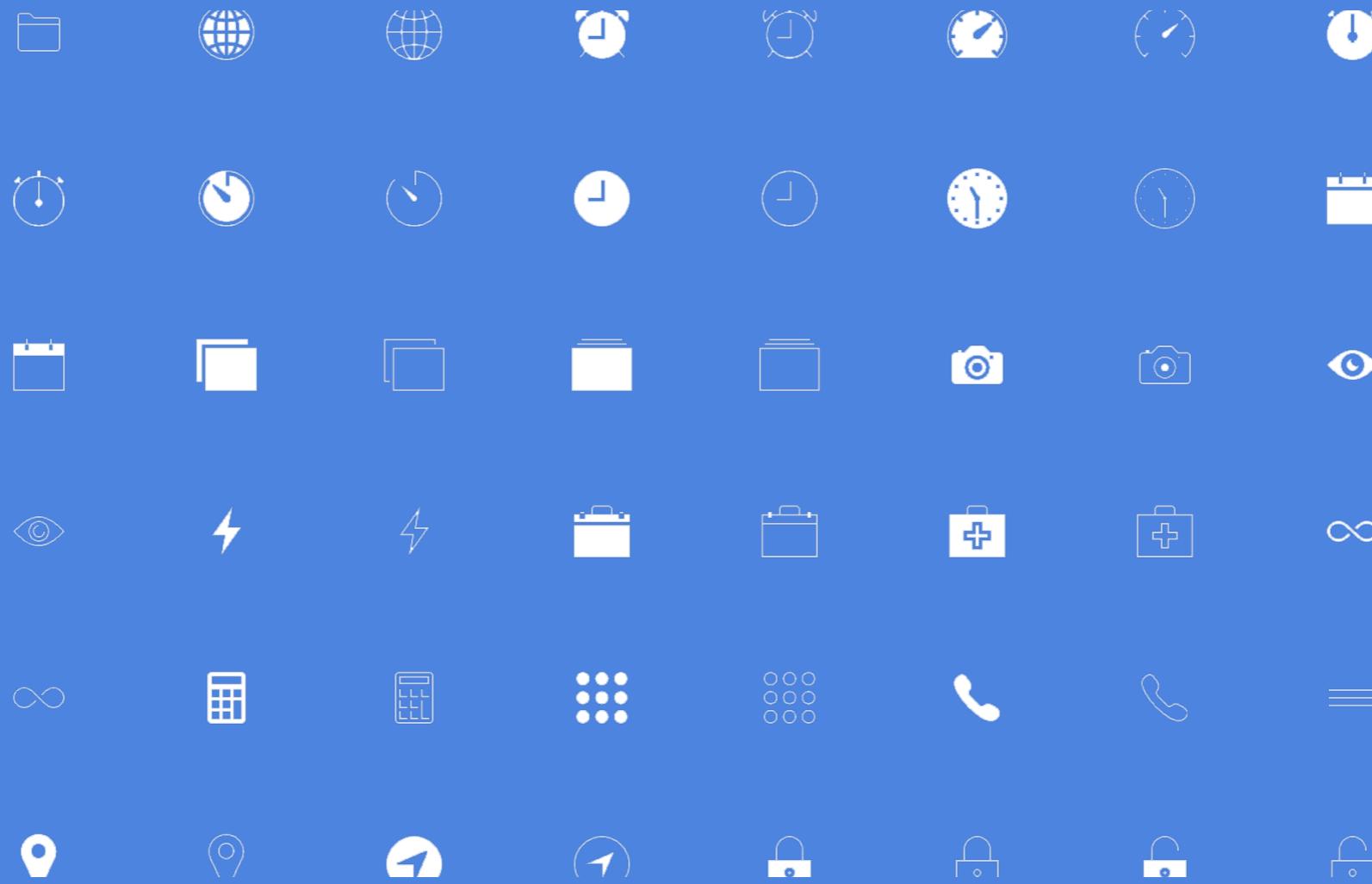
Common design pattern to fetch data

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-list>
  </ion-content>
```





# DID I MENTION ICONS?

Ionicons

Over 700 MIT licensed font-icons included

LET'S LOOK AT A  
REAL APP

# ALL OF OUR PIECES

Cordova for building cross-platform apps  
based on HTML5

Angular for providing a coding structure  
for apps

Ionic for combining the two into a fully  
polished development kit

# GETTING STARTED

Christophe Coenraets Cordova tutorial

Dan Wahlin's Angular in 60-ish minutes

Thinkster.io Ionic tutorial

Ionic in Action Book

# GET STARTED WITH IONIC

[Ionic Getting Started](#)

[Ionic Documentation](#)

[Ionic Forum](#)

[Contribute on GitHub](#)

# WHATS NEXT?

Push Notifications

Analytics

A/B Testing

Code Deploys

Automated Build Service

# ANGULAR 2?

NG-Conf 2015 | Angular 2 & TypeScript

New syntax and much more power

Incredible Fast

New Router





</HTML>

@MHARTINGTON