

```
<?php
function
preprocess_drupalcon($presentation) {
  if ($drupal && $ionic) {
    if ($ionic['app'] = 'Megalomaniac') {
      create $presentation
    }
  }
}
?>
```

**Mark Conroy
- Annertech -**

@markconroy

annertech

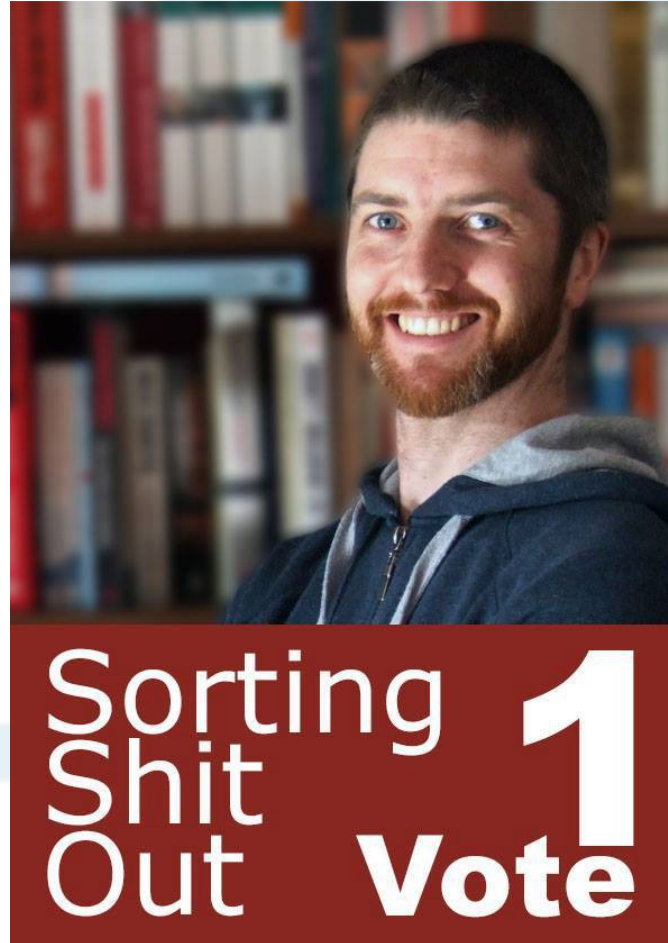
What We'll Talk About Today

- Some background
- Drupal as a RESTful API
- What is Ionic Framework
- Connecting the Dots
- Q&A (please go easy on me)

Some Background

- I decided to run as a candidate in the 2016 General Election.
- I had everything in place ...

...My Poster Campaign



... My Facebook Page

Mark Conroy

Page Messages Notifications Insights Publishing Tools Settings Help

#GE16
#GalwayBeast | #MarkForKing

Mark Conroy
Pet

#GE16
#GalwayBeast
#MarkForKing

THIS WEEK

0 Post Reach

0 Post Engagement

0 Website Clicks

Recent

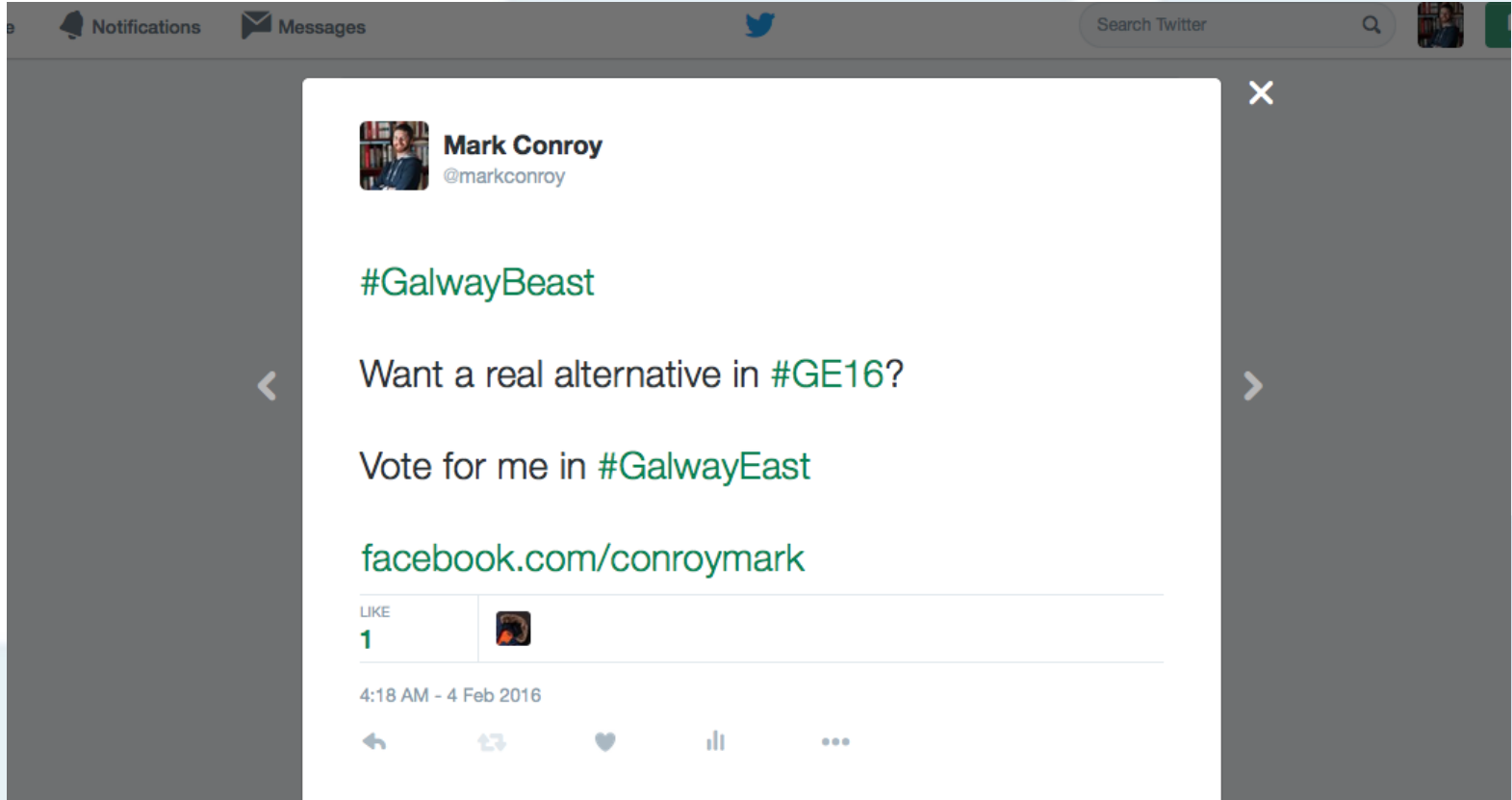
2014

2013

2012

Timeline About Photos Likes More

... A Twitter Hashtag: #GalwayBeast



...an Endorsement from a fellow megalomaniac...



Donald J. Trump

@realDonaldTrump

There is only one credible candidate in #GalwayEast for #GE16 and that's @markconroy

15

RETWEETS

4

FAVORITES



11:10 AM - 8 Mar 2016 - via Twitter · Embed this Tweet



Reply



Delete



Favorite

...and from someone I never heard of...



Hillary Clinton

@HillaryClinton

If [@realDonaldTrump](#) is voting for [@markconroy](#), then so am I. #GE16

18

RETWEETS

9

FAVORITES



2:43 PM - 18 Sep 2016 - via Twitter · Embed this Tweet



Reply



Delete



Favorite

... **except** ...

- I needed an app to get my message out to my tens of followers
- Without one, I wouldn't get elected

What is Drupal?

- Drupal is a content management framework
- We use it to create content management systems, mostly
- It can also be used to ...
- Blah
- Blah
- Blah
- Let's skip the boring parts!

Drupal as a RESTful API

- In Drupal 8 this is simple
- Enable “Serialization” module
- Enable “RESTful Web Services” module
 - You **should** have some authentication as well
 - HTTP Basic Authentication module comes with core
- Create the views you need

Enable Modules

▼ WEB SERVICES

- HAL** ▶ Serializes entities using Hypertext Application Language.
- HTTP Basic Authentication** ▶ Provides the HTTP Basic authentication provider
- RESTful Web Services** ▶ Exposes entities and other resources as RESTful web API
- Serialization** ▶ Provides a service for (de)serializing data to/from formats such as JSON and XML

Install

Create a View

Home Manage Shortcuts admin

Content Structure Appearance Extend Configuration People Reports Help

Add new view ☆

Home » Administration » Structure » Views

VIEW BASIC INFORMATION

View name *
 Machine name: json_articles [Edit]

Description


VIEW SETTINGS
Show: of type: tagged with: sorted by:

PAGE SETTINGS
 Create a page

BLOCK SETTINGS
 Create a block

REST EXPORT SETTINGS
 Provide a REST export
REST export path **Enter a path for the export**

Choose to provide a REST export



Edit View (and then save it)

Displays

REST export + Add

Display name: REST export

TITLE Title: JSON Articles	PATH SETTINGS Path: /articles/articles.json
FORMAT Format: Serializer Settings Show: Entity	ACCESS Access: Permission View published content
FIELDS The selected style or row format does not use fields.	HEADER The selected display type does not use header plugins
FILTER CRITERIA Add ▾ Content: Publishing status (= Yes) Content: Content type (= Article)	FOOTER The selected display type does not use footer plugins
SORT CRITERIA Add ▾ Content: Authored on (desc)	NO RESULTS BEHAVIOR The selected display type does not use empty plugins
	PAGER Items to display: Display a specified number of items 10 items

Save Cancel

Admire your (ugly) JSON

```
{
  "nid": { "value": "208" },
  "uuid": { "value": "c82a03dd-8ecd-4e07-baa0-2585d5eb944d" },
  "vid": { "value": "208" },
  "langcode": { "value": "en" },
  "type": "node_type",
  "target_id": "article",
  "target_type": "node_type",
  "target_uuid": "f3d4d920-7093-4d87-9414-20512a54412c",
  "title": { "value": "Safe Email" },
  "uid": { "target_id": "1", "target_type": "user", "target_uuid": "176359ef-bfal-461e-a200-d9f51357882f", "url": "\/user\/1" },
  "status": { "value": "1" },
  "created": { "value": "1469302480" },
  "changed": { "value": "1473401719" },
  "promote": { "value": "1" },
  "sticky": { "value": "0" },
  "revision_timestamp": { "value": "1469302529" },
  "revision_uid": { "target_id": "1", "target_type": "user", "target_uuid": "176359ef-bfal-461e-a200-d9f51357882f", "url": "\/user\/1" },
  "revision_log": [ ],
  "revision_translation_affected": { "value": "1" },
  "default_langcode": { "value": "1" },
  "path": [ ],
  "body": { "value": "<p>Maecenas ut vehicula augue, ac condimentum augue. Morbi hendrerit condimentum tellus et mattis. Aliquam consetetur, nisl sit amet porta ornare, nisl tellus accumsan urna, sit amet convallis nunc ex nec magna. Nunc efficitur rutrum leo. Donec eleifend, sapien vel dictum fringilla, tellus purus mollis justo, eu placerat purus ante quis tortor. Donec vitae augue malesuada, commodo diam at, pellentesque ante? Ut at augue in dolor viverra accumsan. Nam dapibus tellus lacus, sed sodales lectus sodales eget. Integer faucibus massa lorem. Quisque porttitor fringilla dignissim. Fusce eleifend leo vel diam euismod rutrum. Cras ac enim et nisl laoreet tempor. Vivamus molestie hendrerit lacus ac hendrerit.</p>\r\n\r\n<p>Quisque tempor facilisis tempus. Fusce pellentesque orci quis aliquet egestas. Integer id arcu libero. Mauris mollis elit diam, vitae consequat leo scelerisque eget. Donec ornare ligula ac nunc consetetur tincidunt? Cras lacinia fringilla odio ac molestie. Quisque efficitur odio ex, quis feugiat libero pellentesque eu! Phasellus pulvinar sem non eros laoreet, nec tempus ipsum fringilla. Pellentesque sed sem facilisis, mollis elit sed, tincidunt neque? Mauris volutpat cursus velit eu facilisis. Donec vehicula consequat consequat. Suspendisse gravida neque lorem, at commodo mauris aliquam eget. Cras ullamcorper viverra lacinia. Praesent lobortis ut arcu sed pretium. Mauris convallis diam sit amet nisl dictum dignissim.</p>\r\n\r\n<p>Phasellus at ex sed diam ullamcorper accumsan vel et dolor. Proin molestie interdum ante eu viverra. Maecenas lectus neque, eleifend sed rhoncus vitae, rutrum et tortor. Ut vitae mauris mollis, tristique ipsum id, consetetur magna. Phasellus finibus aliquet elit, id hendrerit ligula faucibus ac. Mauris malesuada turpis eget suscipit sagittis. Proin porta dolor sem, ut sodales arcu laoreet vel. Aenean ornare mi et congue fringilla. Curabitur eu viverra dui. Integer rhoncus enim et nisi suscipit semper. In tempor vitae velit nec finibus. Morbi ex eros, mollis et volutpat vel, euismod ac nisi. Quisque gravida, risus vitae rutrum blandit, nisi leo porttitor est, et euismod leo orci nec arcu. Donec ac turpis in urna vulputate imperdiet porta mollis quam.</p>\r\n\r\n<p>&nbsp;</p>\r\n" }
  "format": "basic_html",
  "summary": "",
  "comment": {
    "status": "2",
    "cid": "0",
    "last_comment_timestamp": "1469302529",
    "last_comment_name": null,
    "last_comment_uid": "1",
    "comment_count": "0"
  },
  "field_email": { "value": "mark@spam.com" },
  "field_file": [ ],
  "field_image": [ ],
  "field_image_media_reference": [ ],
  "field_tags": {
    "target_id": "156",
    "target_type": "taxonomy_term",
    "target_uuid": "845cbdb5-9dd6-49cd-ad08-8f4967e0be5b",
    "url": "\/taxonomy\/term\/156"
  },
  "nid": { "value": "207" },
  "uuid": { "value": "d4f0573e-432e-4f8a-aa05-bee53cebca9c" },
  "vid": { "value": "207" },
  "langcode": { "value": "en" },
  "type": "node_type",
  "target_id": "article",
  "target_type": "node_type",
  "target_uuid": "f3d4d920-7093-4d87-9414-20512a54412c",
  "title": { "value": "TEST - Article" },
  "uid": { "target_id": "1", "target_type": "user", "target_uuid": "176359ef-bfal-461e-a200-d9f51357882f", "url": "\/user\/1" },
  "status": { "value": "1" },
  "created": { "value": "1462798011" },
  "changed": { "value": "1471461497" },
  "promote": { "value": "1" },
  "sticky": { "value": "0" },
  "revision_timestamp": { "value": "1462798021" },
  "revision_uid": { "target_id": "1", "target_type": "user", "target_uuid": "176359ef-bfal-461e-a200-d9f51357882f", "url": "\/user\/1" },
  "revision_log": [ ]
}
```


You Now Have RESTful Data

- You now have RESTful data
- You can consume this for whatever purpose
 - Create a headless Drupal site
 - Allow it as a canonical source for other sites in your business
 - Differentiate a great editor experience from a great front-end user experience
 - Pull it into an app – our goal today!

What is Ionic Framework

- A hybrid web app development kit
- Based on Cordova and AngularJS
- Packages HTML, CSS, and JS into
 - Android apps
 - iOS apps
- Does NOT create Windows apps
- You need a Mac to create the final iOS app(s)

What is Ionic Framework

- Comes with LOADS of built-in features
 - Lists
 - Navigation/Tabs
- and classes
 - This helps apps to have a native look and feel
 - Everything can be overridden to give custom look and feel
- Comes with support for SCSS
- Has live reload built-in

Loads of Built-in Features



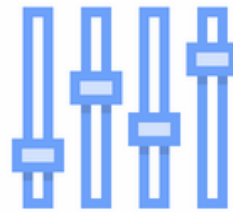
Overview

Learn everything you need to know to get up and running with the framework.



CSS Components

A comprehensive list of our CSS mobile components. Everything you'd need.



JavaScript

Explore our API docs for information on the Controllers and Javascript utilities.



The Ionic Book

A mini-book written to help you get familiar with the Ionic Framework.



Ionicons

Over 500 custom designed font icons MIT licensed & ready to use with ionic.



HTML5 Input Types

How and when to use the many mobile input types in your app.

E.G. CSS – Card List

OVERVIEW

CSS COMPONENTS

Header

Content

Footer

Buttons

List

Cards

Headers & Footers

Lists

Images

Showcase

Forms

Toggle

Checkbox

Radio Buttons

Range

Select

Tabs

Grid

Utility

Card Lists

Use the `list card` classname to create a card with lists.

```
<div class="list card">

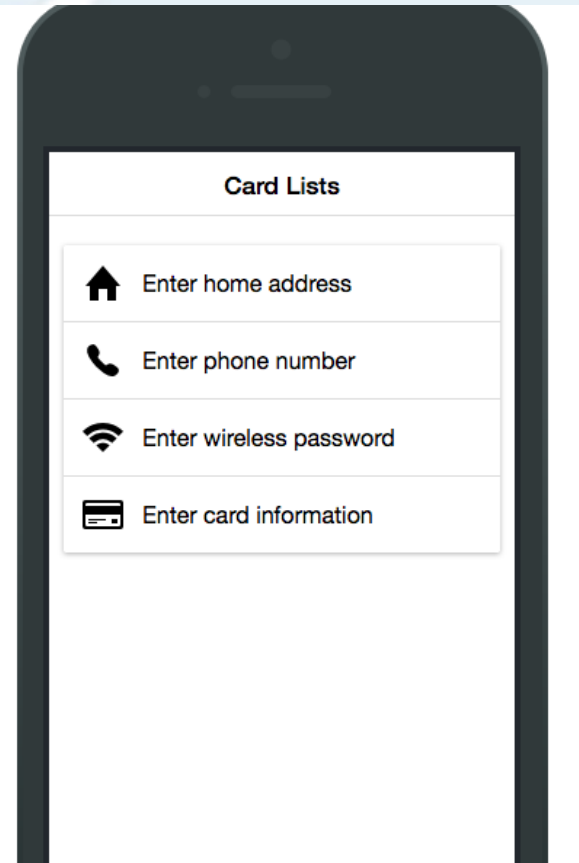
  <a href="#" class="item item-icon-left">
    <i class="icon ion-home"></i>
    Enter home address
  </a>

  <a href="#" class="item item-icon-left">
    <i class="icon ion-ios-telephone"></i>
    Enter phone number
  </a>

  <a href="#" class="item item-icon-left">
    <i class="icon ion-wifi"></i>
    Enter wireless password
  </a>

  <a href="#" class="item item-icon-left">
    <i class="icon ion-card"></i>
    Enter card information
  </a>

</div>
```



E.G. JS – Modal Dialog 1

OVERVIEW

CSS COMPONENTS

PLATFORM

CUSTOMIZATION

JAVASCRIPT

Action Sheet

Backdrop

Content

Form Inputs

Gestures and Events

Headers/Footers

Keyboard

Lists

Loading

Modal

\$ionicModal

ionicModal

Navigation

Platform

\$ionicModal

[View Source](#)[Improve this doc](#)

Related: [ionicModal controller](#).

The Modal is a content pane that can go over the user's main view temporarily. Usually used for making a choice or editing an item.

Put the content of the modal inside of an `<ion-modal-view>` element.

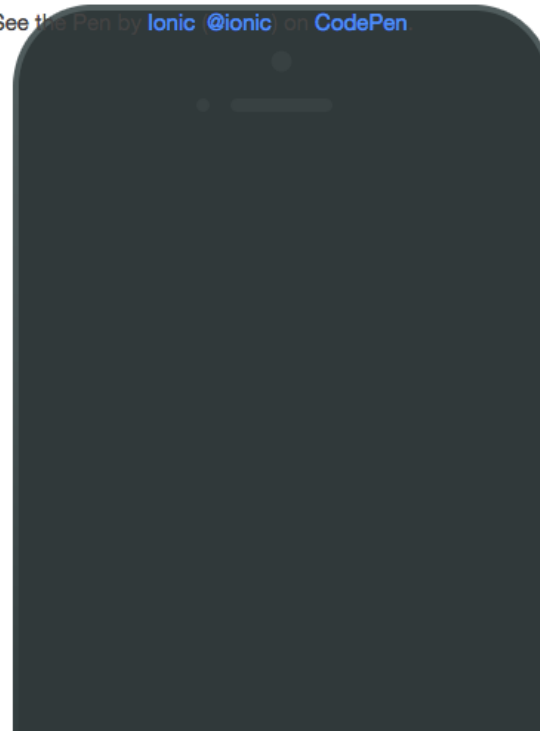
Notes:

- A modal will broadcast 'modal.shown', 'modal.hidden', and 'modal.removed' events from its originating scope, passing in itself as an event argument. Both the modal.removed and modal.hidden events are called when the modal is removed.
- This example assumes your modal is in your main index file or another template file. If it is in its own template file, remove the script tags and call it by file name.

Usage

```
<script id="my-modal.html" type="text/ng-template">
  <ion-modal-view>
    <ion-header-bar>
      <h1 class="title">My Modal title</h1>
    </ion-header-bar>
```

See the [Pen](#) by [Ionic](#) [@ionic](#) on [CodePen](#)



E.G. JS – Modal Dialog 2

Slide Box

Spinner

Tabs

Tap & Click

Utility

CLI

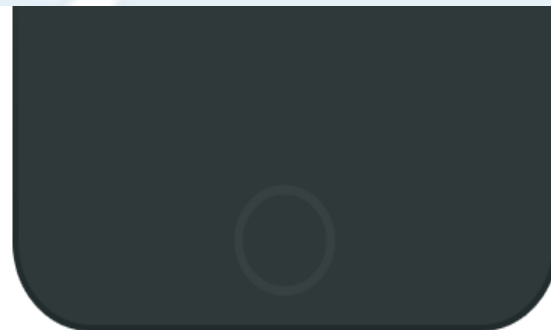
GUIDE

FAQ

GETTING HELP

IONIC CONCEPTS

```
angular.module('testApp', ['ionic'])
.controller('MyController', function($scope, $ionicModal) {
  $ionicModal.fromTemplateUrl('my-modal.html', {
    scope: $scope,
    animation: 'slide-in-up'
  }).then(function(modal) {
    $scope.modal = modal;
  });
  $scope.openModal = function() {
    $scope.modal.show();
  };
  $scope.closeModal = function() {
    $scope.modal.hide();
  };
  // Cleanup the modal when we're done with it!
  $scope.$on('$destroy', function() {
    $scope.modal.remove();
  });
  // Execute action on hide modal
  $scope.$on('modal.hidden', function() {
    // Execute action
  });
  // Execute action on remove modal
  $scope.$on('modal.removed', function() {
    // Execute action
  });
});
```



Create a Basic App

- Run 'ionic start [appName] [appStyle]'
 - appStyle can be
 - blank
 - tabs
 - sidemenu

Tabs & SideMenu

Welcome to Ionic

This is the Ionic starter for tabs-based apps. For other starters and ready-made templates, check out the [Ionic Market](#).

To edit the content of each tab, edit the corresponding template file in `www/templates/`. This template is `www/templates/tab-dash.html`

If you need help with your app, join the Ionic Community on the [Ionic Forum](#). Make sure to [follow us](#) on Twitter to get important updates and announcements for Ionic developers.

For help sending push notifications, join the [Ionic Platform](#) and check out [Ionic Push](#). We also have other services available.



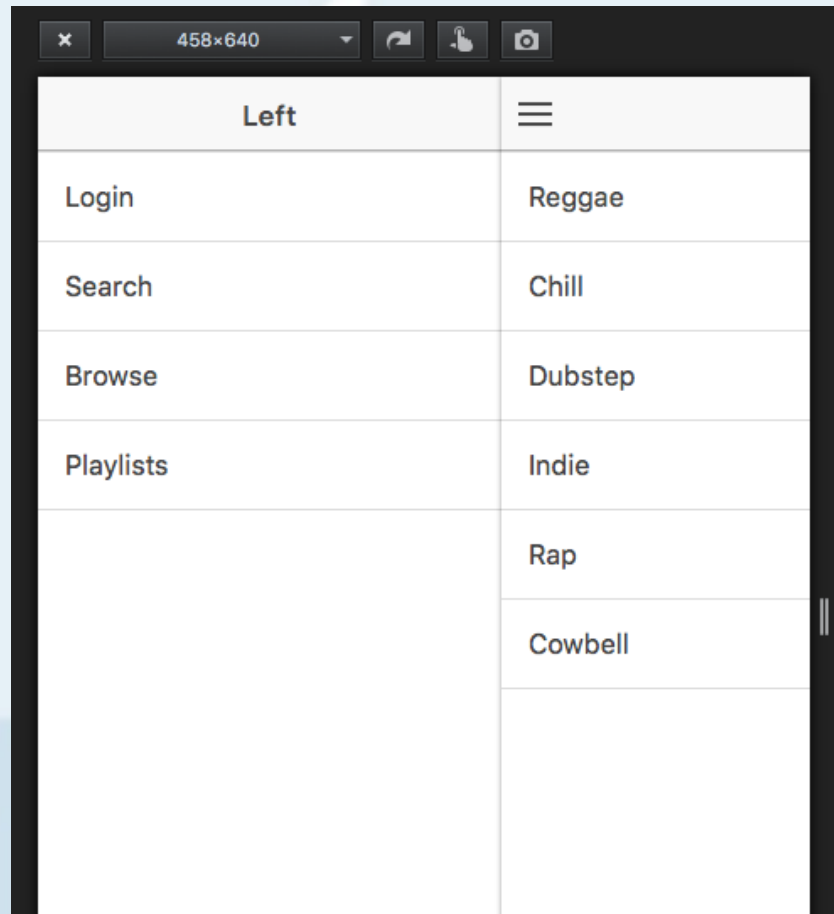
Status



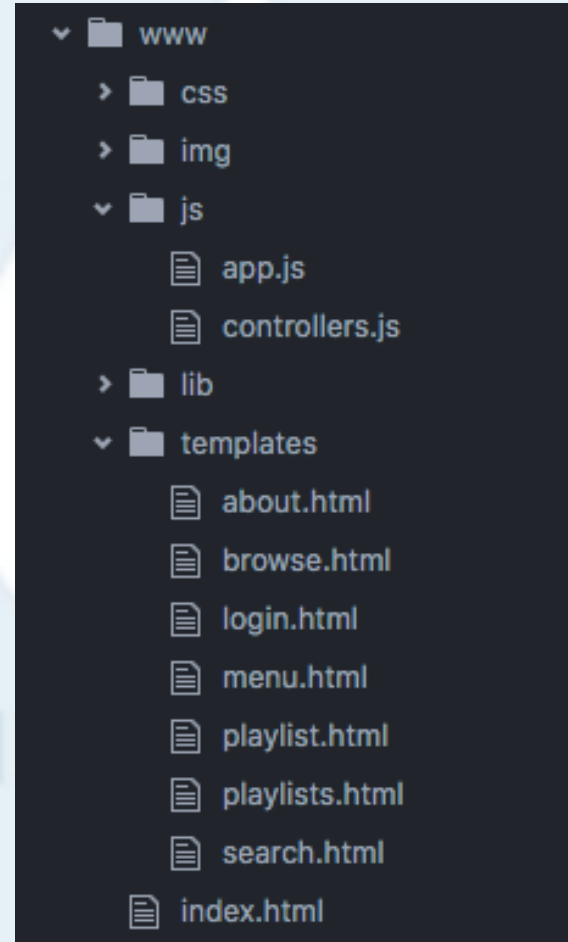
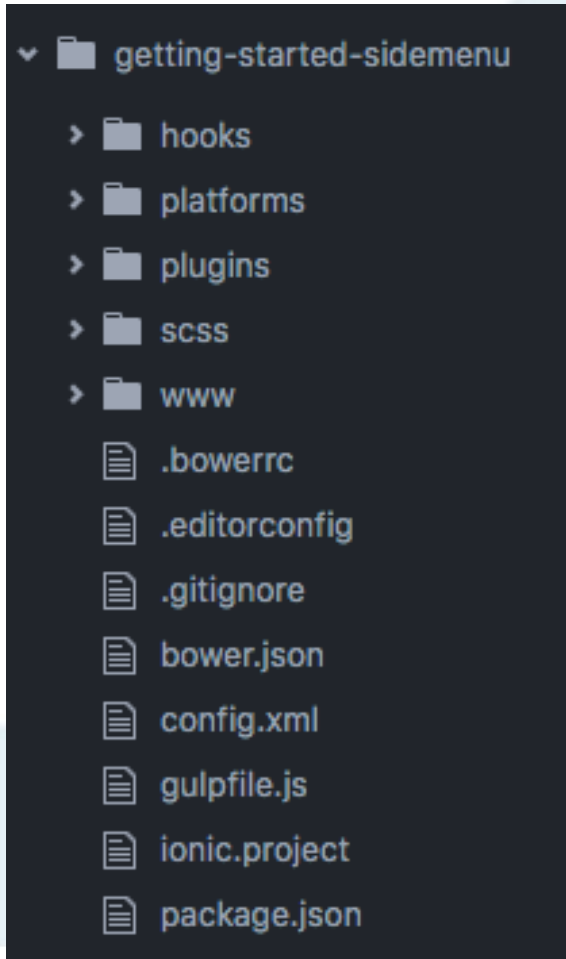
Chats



Account



Directory/File Structure of Ionic



Add New Page to your App

- 1) In `www/js/app.js` copy one of the states and edit to reflect your new info
- 2) Add a menu entry in `www/templates/menu.html`
- 3) Create a template file in `/templates` for your HTML
- 4) Create a controller for your state (if needed)

Edit States in app.js

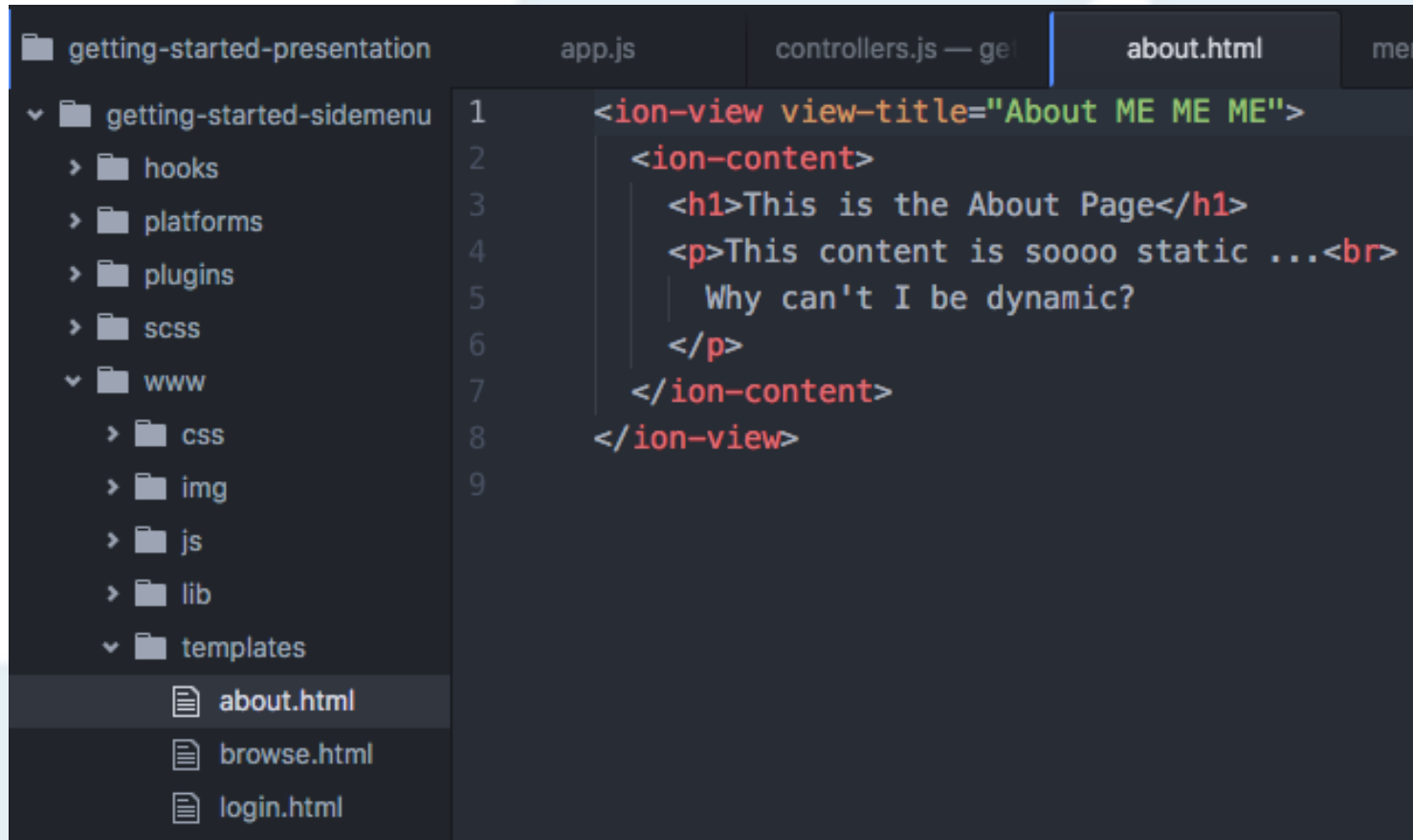
```
.state('app.playlists', {  
  url: '/playlists',  
  views: {  
    'menuContent': {  
      templateUrl: 'templates/playlists.html',  
      controller: 'PlaylistsCtrl'  
    }  
  }  
})
```

```
.state('app.about', {  
  url: '/about',  
  views: {  
    'menuContent': {  
      templateUrl: 'templates/about.html',  
      controller: 'AboutCtrl'  
    }  
  }  
})
```

Add the Menu Entry in menu.html

```
<ion-item menu-close href="#/app/browse">
  Browse
</ion-item>
<ion-item menu-close href="#/app/playlists">
  Playlists
</ion-item>
<ion-item menu-close href="#/app/about">
  About ME ME ME
</ion-item>
</ion-list>
</ion-content>
</ion-side-menu>
</ion-side-menus>
```

Create a template (if needed) in /templates



The screenshot shows a code editor interface with a file explorer on the left and a code editor on the right. The file explorer shows a project structure with a 'templates' folder highlighted. The code editor shows the content of 'about.html' with the following HTML code:

```
1 <ion-view view-title="About ME ME ME">
2   <ion-content>
3     <h1>This is the About Page</h1>
4     <p>This content is soooo static ...<br>
5       Why can't I be dynamic?
6     </p>
7   </ion-content>
8 </ion-view>
9
```

New Menu Item and View are Added

Left	≡
Login	This is the homopa
Search	Reggae
Browse	Chill
Playlists	Disco
About ME ME ME	≡

This content is soooo static ...
Why can't I be dynamic?

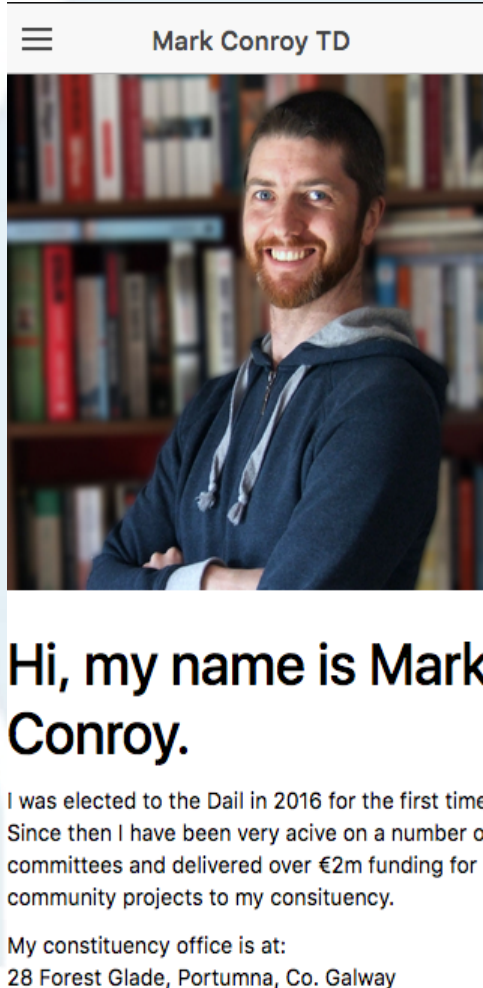
Create More Pages?

- Repeat the first first steps again
 - Add a new state
 - Add a template (or re-use an existing one)
 - Add a menu item
 - Eat cake
- But this will only create static content
- Each time you try to update your app in App Store or Play Store you will need to re-submit it

Dynamic Content

- The content created to now is static.
- Let's connect it to our Drupal RESTful service from earlier
- Means any content updated on the website will automatically update on the app
- Any new content added (such as a news/blog post) will be added to the list on your app and available for reading
- You don't need to re-submit your app for each new piece of content

We'll Create Something Like This:



Using Data Like This

```
{
  "nodes" : [
    {
      "node" : {
        "title" : "Mark Conroy",
        "main_image": {
          "src": "sample-content/images/news/mark-conroy-web.jpg",
          "alt": "Mark Conroy elected as TD for Galway East"
        },
        "phone" : "087 3689507",
        "email" : "mark@mark.ie",
        "consituency_office" : "28 Forest Glade, Portumna, Co. Galway",
        "short_bio" : "I was elected to the Dail in 2016 for the first time.",
        "facebook" : "https://www.facebook.com/markconroy",
        "twitter" : "https://www.twitter.com/markconroy",
        "instagram" : "https://www.twitter.com/markconroy",
        "linkedin" : "https://www.twitter.com/markconroy",
        "flickr" : "https://www.twitter.com/markconroy"
      }
    }
  ]
}
```

Create a single page

- Edit Controller to use the \$http service
- In my case I have a controller called 'PersonalCtrl'
- I use the '\$http' service from AngularJS to 'GET' the JSON data
- I then use 'expressions' in my html to situate that data in my template

PersonalCtrl

```
.controller('PersonalCtrl', function($scope, $http) {  
  $http.get("sample-content/personal-info.json")  
    .success(function(data) {  
      $scope.personalItem = data.nodes[0];  
    })  
    .error(function(data) {  
      console.log("ERROR: " + data);  
    });  
});  
});
```

Attached with HTML like this (home.html)

```
<ion-view>
  <ion-nav-title ng-controller="PersonalCtrl">{{ personalItem.node.title }} TD</ion-nav-title>
  <ion-content ng-controller="PersonalCtrl" ng-init="init()" class="has-header">

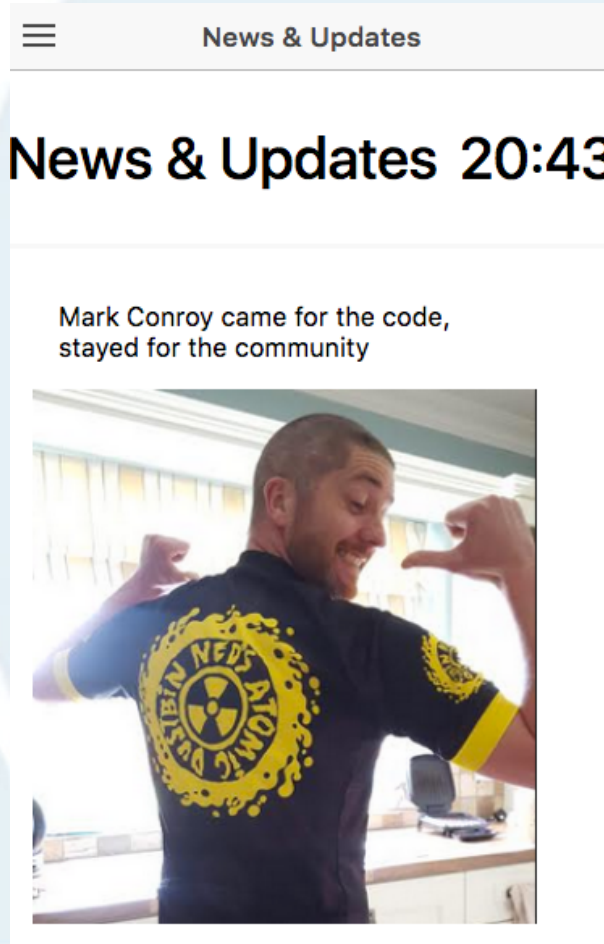
    
    <h1>Hi, my name is {{ personalItem.node.title }}.</h1>
    <p>{{ personalItem.node.short_bio }}</p>
    <p>My constituency office is at:<br>
      {{ personalItem.node.constituency_office }}
    </p>
    <p>You can also contact me by phone: {{ personalItem.node.phone }} and/or email: {{ persona
  </ion-content>
</ion-view>
```

PersonalCtrl Anatomy

The image shows a mobile application interface for a user profile. The profile information is displayed on a white background against a dark app theme. Annotations in pink text with arrows point to specific UI elements, showing how they are bound to data in a JavaScript object using AngularJS syntax.

- Header:** The name "Mark Conroy TD" is displayed next to a hamburger menu icon. It is annotated with `{{ personalltem.node.title }}`.
- Image:** A portrait of Mark Conroy is shown. The image tag is annotated with ``.
- Short Bio:** The text "Hi, my name is Mark Conroy." is annotated with `{{ personalltem.node.short_bio }}`.
- Constituency Office:** The text "My constituency office is at: Unit 1, Bride Street, Loughrea, Co. Galway" is annotated with `{{ personalltem.node.constituency_office }}`.

Create a Listing Page Like This:



Using Data Like This:

```
"nodes": [  
  {  
    "node": {  
      "nid": "147",  
      "title": "Mark Conroy came for the code, stayed for the community",  
      "website": "http://www.awalker.ie/index.php",  
      "main_image": {  
        "src": "sample-content/images/news/mark-conroy-neds.png",  
        "alt": "Rabbitte becomes first ever TD elected from Portumna"  
      },  
      "summary": "This is a short news snippet."  
    }  
  },  
  {  
    "node": {  
      "nid": "226",  
      "title": "Mark Conroy re-elected as TD for Galway East",  
      "website": "http://www.adesignforlife.net",  
      "main_image": {  
        "src": "sample-content/images/news/mark-conroy-dapper.png",  
        "alt": "Mark Conroy re-elected as TD for Galway East"  
      },  
      "summary": "This is a short news snippet. This is a short news snippe"  
    }  
  },  
  {  
    "node": {  
      "nid": "147",  
      "title": "Mark Conroy becomes first ever TD elected from Portumna",  
      "website": "http://www.awalker.ie/index.php",  
    }  
  }  
]
```

Create a Listing Page

- Same as for above.
- Edit correct controller
- Add in an 'ng-repeat' property to the HTML to show each item in the list
- Add click function to open each item in its own view

NewsCtrl

```
.controller('NewsCtrl', function($scope, $http) {
  $scope.init = function() {
    $http.get("sample-content/news.json")
      .success(function(data) {
        $scope.nodes = data.nodes;
        $scope.browse = function(v) {
          window.open(v, "_system", "location=yes");
        };
        window.localStorage["nodes"] = JSON.stringify(data.nodes);
      })
      .error(function(data) {
        console.log("ERROR: " + data);
        if(window.localStorage["nodes"] !== undefined) {
          $scope.entries = JSON.parse(window.localStorage["nodes"]);
        }
      });
  };
});
```

News List HTML

```
<ion-list class="list cleared">
  <ion-item ng-repeat="node in nodes" ng-if="$index < 3" class="node" href="#/app/news/147"
    <h2>{{node.node.title}}</h2>
    <div class="image-holder">
      
    </div>
  </ion-item>
</ion-list>
```

Listing Page Anatomy



The image shows a mobile application interface for 'News & Updates'. The top bar has a hamburger menu icon and the text 'News & Updates'. Below this is a section header 'News & Updates' and a timestamp '12:56'. A news item is displayed with the title 'Mark Conroy re-elected as TD for Galway East' and a main image of Mark Conroy. Three red arrows point from the code annotations on the right to these elements: the first arrow points to the top section header, the second to the news title, and the third to the main image.

`<ion-item ng-repeat="node in nodes">`

`{{ node.node.title }}`

``

Need More Data in your App?

- Repeat the above
- Again
- And again
- And again

Build the App

- To build, run:
 - ionic build android
 - ionic build ios
- To test, run:
 - ionic emulate android
 - ionic emulate ios

Deploying the App to Ionic Cloud

- You can deploy to the Ionic server
 - Register it with Ionic Cloud – www.ionic.io
 - The simply run 'ionic upload' command
- Ionic View app to preview it and test it
- You can send links to this to others to view and test also
- Updates to the app can be deployed from here
- You can use this as your Push Notification centre, user authentication center and more

Deploying the App to Apple/Google

- Create your developer account
- Jump through the hoops
- Upload your app
- Wait
- Have app accepted

JOIN US FOR CONTRIBUTION SPRINTS

First Time Sprinter Workshop - 9:00-12:00 - Room Wicklow2A

Mentored Core Sprint - 9:00-18:00 - Wicklow Hall 2B

General Sprints - 9:00 - 18:00 - Wicklow Hall 2A

WHAT DID YOU THINK?

Evaluate This Session

events.drupal.org/dublin2016/schedule

THANK YOU!

annertech



26-27 May 2017
Athens, Greece



THANKS FOR LISTENING!

Got any Questions?

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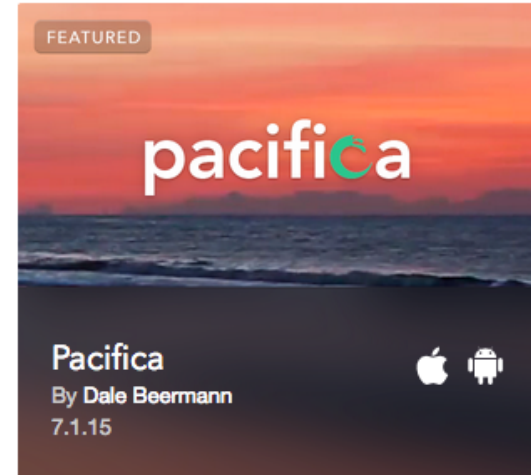
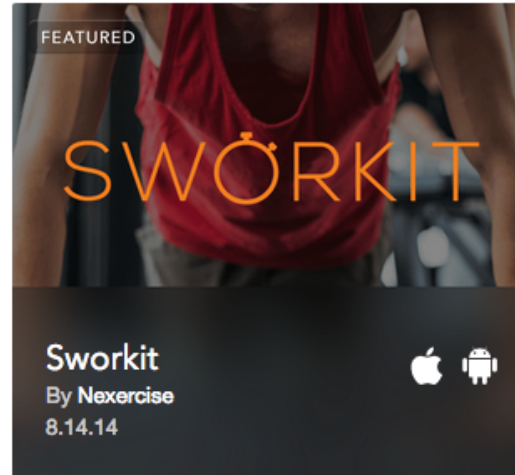
Q&A 1 – Sample Apps

Featured



Submit

A showcase of the most beautiful apps built with Ionic



Q&A 2 – Push Notifications

- Yes. You can create push notifications.
 - Ionic Cloud gives you 1,000,000 per month on the starter plan
 - Apple store apps want you to use their service
 - APN – Apple Push Notification
 - Google Play apps want you to use their service
 - Google Cloud Messaging

Q&A 3 – Interact with Your Phone

- Yes. Anything that your phone can do, Ionic can interact with
 - Geolocation
 - Camera
 - Maps
 - Time
 - Other apps

Q&A 4 – Extending with Plugins

- Yes. You can extend it with custom plugins if you wish
- You can also use any cordova plugins that are available

Q&A 5 – Ionic 2 && Angular 2?

- Angular 2 has just been released
- Ionic 2 is just about to be released
- I don't have much more information