ANGULARJS
by Google

Best Practices

From Nutshell To Awesome Thing

By HenryTao – http://henrytao.me

Agenda

- Quick Intro
- Main Features And Why It's Awesome
- Single Page Apps vs Classical Apps
- Best Practices
- SEO?
- What's Next With Angular 2.0?
- Resources

Quick Intro

AngularJS is built around the belief that **declarative programming** should be used for **building UIs and wiring software components**, while **imperative programming** is excellent for expressing **business logic**.[1] The framework adapts and **extends traditional HTML** to better serve dynamic content through **two-way data-binding** that allows for the automatic synchronization of models and views. As a result, **AngularJS deemphasizes DOM manipulation and improves testability**.

Quick Intro

Extends HTML

Cool

2 ways data-binding

SPAs

Template

Reuse component

All static file

Main Features & Why It's Awesome

- **Template**
- **2 ways data-binding**
- Routing
- Directives
- Services / Factory
- Dependency injection
- Testing

Main Features & Why It’s Awesome

```
<html ng-app="phonecatApp">
<head>
  ...
  <script src="lib/angular/angular.js"></script>
  <script src="js/controllers.js"></script>
</head>
<body ng-controller="PhoneListCtrl">

  <ul>
    <li ng-repeat="phone in phones">
          {{phone.name}}
          <p>{{phone.snippet}}</p>
    </li>
  </ul>

</body>
</html>
```

```
var phonecatApp =
angular.module('phonecatApp', []);

phonecatApp.controller('PhoneListCtrl',
function ($scope) {
    $scope.phones = [{
        'name': 'Nexus S',
        'snippet': 'Fast ...with Nexus S.’
    }, {
        'name': 'Motorola ... with Wi-Fi',
        'snippet': ’The ...tablet.’
    }, {
        'name': 'MOTOROLA XOOM™',
        'snippet': 'The ... let.’
    }];
});
```

http://docs.angularjs.org/tutorial/step_02

Single Page Apps vs Classical Apps

Single Page Apps	Classical Apps
ng-app	html string
controller	jQuery object
template	manual bootstrap
done	done
-	-
-	-

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Single Page Apps vs Classical Apps

Manual Bootstrap Angular Code

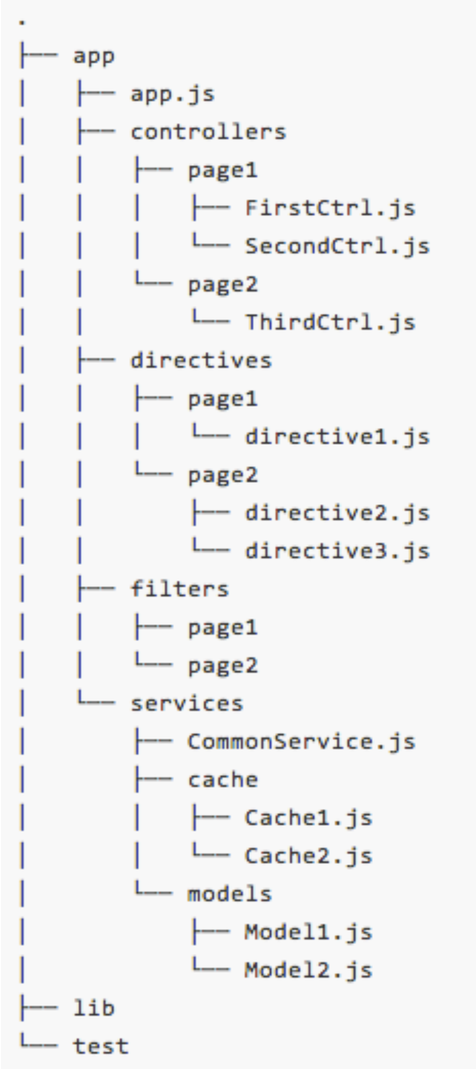
```
angular.module(‘myModule’, []).controller(‘myCtrl’, function($scope){
    // do something
});

var template = “<div ng-controller=‘myCtrl’>Your html code with angular
binding {{data}}</div>”;

var $template = $(template);

angular.bootstrap($template, [‘myModule']);

// $template is a jQuery object which already bootstrapped by AngularJS.
```

Best Practices

- AngularJS style guide
  https://github.com/.../angularjs-style-guide
- Best practices from Father of AngularJS
  http://www.youtube.com/watch?v=...CY
- Full stack vs Classical App
- Single Page App vs Classical App (manual)
- MVC vs Module
- JS All-in-one vs RequireJS
- ng boilerplate (see here)
- boilerplate^{+} + sailsjs + Java API + gruntjs + bowerjs

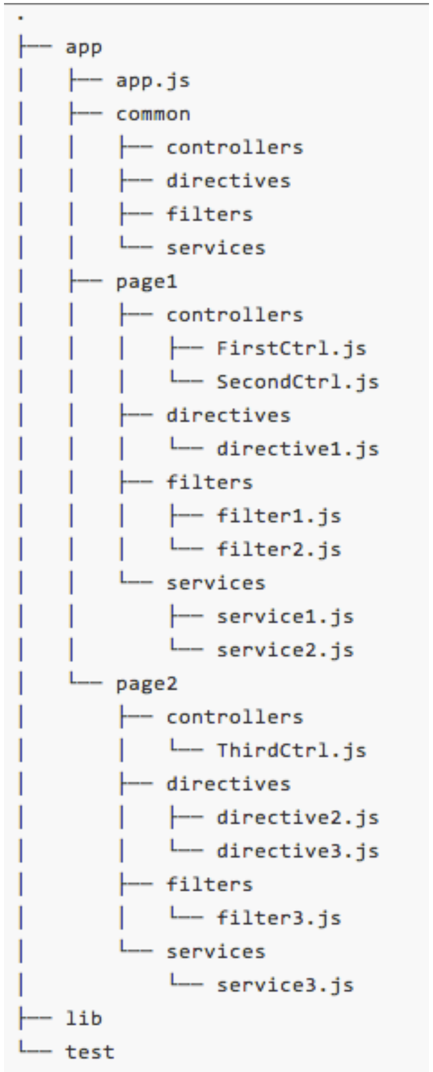
ANGULARJS

Best Practices



```
.
├── app
│   ├── app.js
│   ├── controllers
│   │   ├── page1
│   │   │   ├── FirstCtrl.js
│   │   │   └── SecondCtrl.js
│   │   └── page2
│   │       └── ThirdCtrl.js
│   ├── directives
│   │   ├── page1
│   │   │   └── directive1.js
│   │   └── page2
│   │       ├── directive2.js
│   │       └── directive3.js
│   ├── filters
│   │   ├── page1
│   │   └── page2
│   └── services
│       ├── CommonService.js
│       ├── cache
│       │   ├── Cache1.js
│       │   └── Cache2.js
│       └── models
│           ├── Model1.js
│           └── Model2.js
│
├── lib
└── test
```

MVC vs Module



```
.
├── app
│   ├── app.js
│   ├── common
│   │   ├── controllers
│   │   ├── directives
│   │   ├── filters
│   │   └── services
│   ├── page1
│   │   ├── controllers
│   │   │   ├── FirstCtrl.js
│   │   │   └── SecondCtrl.js
│   │   ├── directives
│   │   │   └── directive1.js
│   │   ├── filters
│   │   │   ├── filter1.js
│   │   │   └── filter2.js
│   │   └── services
│   │       ├── service1.js
│   │       └── service2.js
│   └── page2
│       ├── controllers
│       │   └── ThirdCtrl.js
│       ├── directives
│       │   ├── directive2.js
│       │   └── directive3.js
│       ├── filters
│       │   └── filter3.js
│       └── services
│           └── service3.js
├── lib
└── test
```

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SEO?

The problem of **MOST SPAs**

SOME SOLUTIONS

Search engine **_escaped_fragment_**

➔ *from: http://…***#***html5-pushstate*

➔ *to: http://…***?**_escaped_fragment_=*html5-pushstate*

Prerender.io – Opensource project

Brombone.com – Commercial project

What's Next With Angular 2.0?

- Airbnb – Rendr
  Backbone in apps in the browser and Node.
- jQuery on nodejs
- Polymer-project
  Web component
- **AngularJS 2.0**
  Server-side prerendering
  Simplify directive
  Animation

Resources

- Airbnb

  http://nerds.airbnb.com/weve-open-sourced-rendr-run-your-backbonejs-a/

- AngularSEO

  http://www.yearofmoo.com/2012/11/angularjs-and-seo.html

- AngularJS Video

  http://egghead.io/lessons

- gruntjs, bowerjs, ng-boilerplate, sailjs, requirejs, less