



ANGULARJS

by Google



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DIA 1

Introdução, história das web-apps, AngularJS, Hello World ng









http://bit.ly/material_referencia

git clone https://github.com/tiagolpadua/cadastro-patrimonio-ng.git

Parte I

Introdução

A green rectangular street sign with a white border and a scalloped edge. The words "The Beginning" are written in large, white, sans-serif capital letters. The sign is mounted on a wooden post. The background is plain white.

The Beginning



EXPLORER



WORKING FILE

www.ts src



NODE-EXPRES

.vscode

node_mod

SRC

public

routes

styles

style.less

views

app.ts

tsconfig.json

tsd.d.ts

www.ts

tests

ext install

C# 181280

0.3.7 Microsoft

C# for Visual Studio Code (powered by OmniSharp).

README

LICENSE



Python 105661

0.3.7 Don Jayamanne

Linting, Debugging (multi-threaded, remote), Intellisense, auto-completion...

older

```
12    // into css files to the ./public/stylesheets folder
13    gulp.task('less', function () {
14        return gulp.src('./src/styles/**/*.less')
15            .pipe(less({ var path: any
16                paths: [path.join(__dirname, 'less', 'includes')]
17            }))
18            .pipe(gulp.dest('./src/public/stylesheets'));
19    });
20
21
22    // run mocha tests in the ./tests folder
23    gulp.task('test', function () {
24
```



master*



0



0

Ln 16, Col 24

Spaces: 4

UTF-8

LF

JavaScript



serpro@serpro-VirtualBox: ~/workspace_js/cadastro-patrimonio-ng

serpro@serpro-VirtualBox: ~/work... X serpro@serpro-VirtualBox: ~/work... X serpro@serpro-VirtualBox: ~/work... X

```
serpro@serpro-VirtualBox:~/workspace_js/cadastro-patrimonio-ng$ node --version  
v4.4.5
```

```
serpro@serpro-VirtualBox:~/workspace_js/cadastro-patrimonio-ng$ npm --version  
2.15.5
```

```
serpro@serpro-VirtualBox:~/workspace_js/cadastro-patrimonio-ng$ npm list -g --depth=0  
/usr/lib  
└── bower@1.7.9  
├── grunt@1.0.1  
├── jscs@3.0.5  
├── jshint@2.9.2  
├── npm@2.15.5  
├── tslint@3.11.0  
├── typescript@1.8.10  
└── typings@1.3.0
```

```
serpro@serpro-VirtualBox:~/workspace_js/cadastro-patrimonio-ng$ █
```

Hello



```
hello.html hello_world
```

```
1  <!DOCTYPE html>
2  <html>
3
4  <head>
5      <title>Hello World!</title>
6      <meta charset="UTF-8">
7      <script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.4/jquery.min.js"></script>
8      <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.6/angular.min.js"></script>
9  </head>
10
11 <body>
12     <h1 id="output"></h1>
13     <input id="input" type="text">
14 </body>
15
16 </html>
```

```
hello.jq.html hello_world
```

```
1  <!DOCTYPE html>
2  <html>
3
4  <head>
5      <script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.4/jquery.min.js"></script>
6  </head>
7
8  <body>
9      <h1 id="output"></h1>
10     <input id="input" type="text">
11     <script>
12         var input = $('#input');
13         var output = $('#output');
14         |
15         input.keyup(updateOutput);
16
17         updateOutput();
18
19         function updateOutput() {
20             console.log('Atualizando!');
21             output.text('Hello ' + input.val());
22         }
23
24     </script>
25 </body>
26
27 </html>
```

```
hello.ng.html hello_world
```

```
1  <!DOCTYPE html>
2  <html ng-app>
3
4  <head>
5      <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.6/angular.min.js"></script>
6  </head>
7
8  <body>
9      <h1>Hello {{texto}}</h1>
10     <input type="text" ng-model="texto">
11 </body>
12
13 </html>
```



ANGULARJS
by Google

Data Binding

MVC

Routing

Testing

jqLite

Templates

History

Factories



angularJS is a full-featured
SPA framework

ViewModel

Controllers

Views

Directives

Services

Dependency Injection

Validation

Comparar Termos de pesquisa ▾

jsf

Termo de pesquisa

aspx

Termo de pesquisa

angularjs

Termo de pesquisa

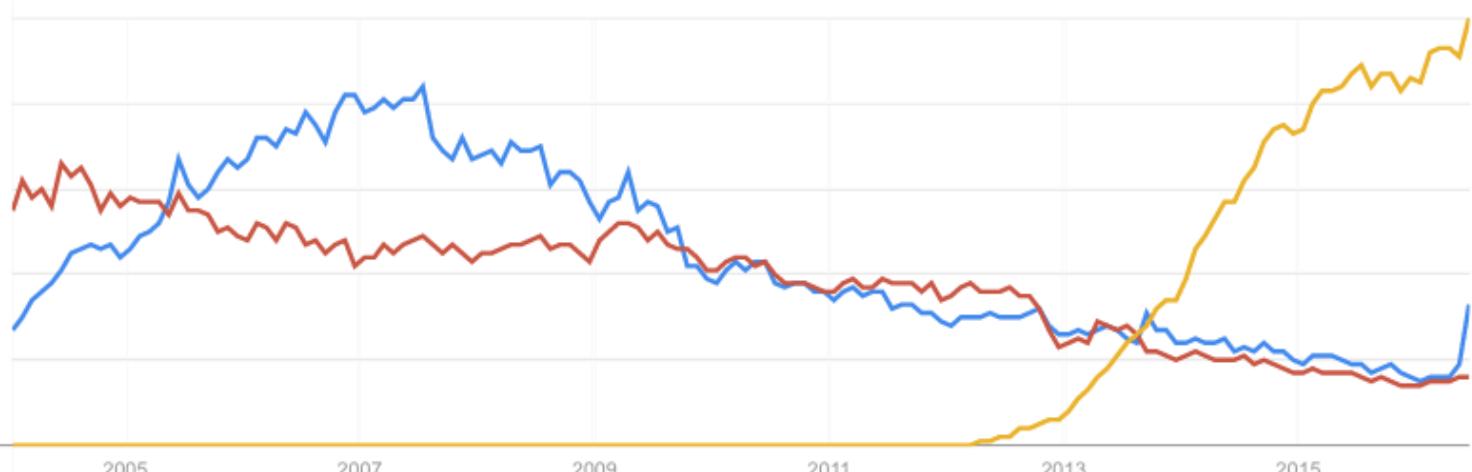
+ Adicionar termo

Interesse com o passar do tempo



Títulos das notícias

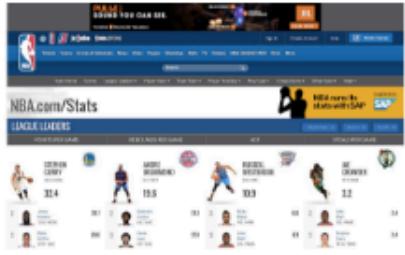
Previsão



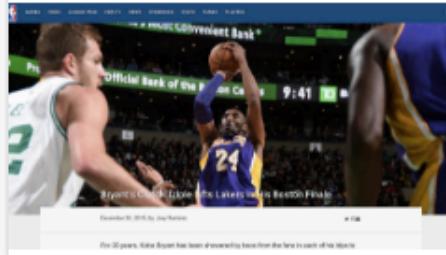
[SEE ALL](#)

Sports

NBA.com Stats



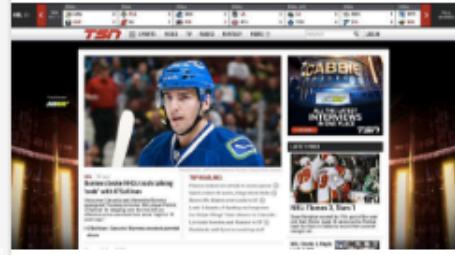
NBA Global



Atlantic Coast Conference

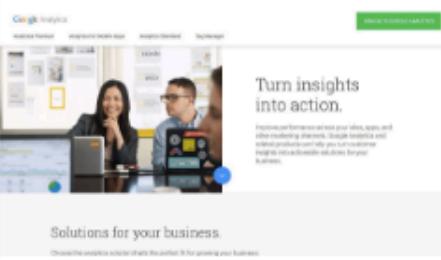


The Sports Network

[SEE ALL](#)

By Google

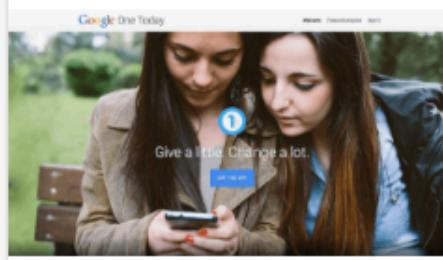
Google Analytics



Android Experiments



Google One Today



OnHub Makers



Weather

The Weather Channel



Books & Reference

SEE ALL

Apple Developer Search

This screenshot shows the Apple Developer Search interface. At the top, there's a navigation bar with links like 'Developer', 'Home', 'Search', 'Project', 'Support', and 'Member Center'. Below the navigation is a search bar with the word 'Search' typed into it. Underneath the search bar, there's a list of search results, with the first item being 'The Home Base of the Best'.

Ancestry.com

This screenshot shows the Ancestry.com homepage. It features a 'Get Started on Ancestry' section with a 'Find your family story' button. Below this are sections for 'Product and Services' and 'Family Tree Manager'. A search bar is located at the bottom of the main content area.

Britannica.com

This screenshot shows the Britannica.com homepage. It features a banner for 'ENCYCLOPEDIA BRITANNICA' and a section titled 'BRITANNICA STORIES' with various news items. A search bar is located at the bottom of the main content area.

Amazon

This screenshot shows the Amazon homepage. It features a search bar at the top, followed by a 'Manage Your Content and Devices' section with various device management options. A sidebar on the left lists categories like 'Books', 'Movies & TV', 'Music', and 'Home & Kitchen'.

Transportation

SEE ALL

Ford

This screenshot shows the Ford website. It features a large image of a white Ford Fusion car with the word 'Fusion' written vertically next to it. There are also smaller images of other Ford vehicles and a 'Ford Go Further' button.

Blue Origin

This screenshot shows the Blue Origin website. It features a dark background with a white rocket ship and the text 'SOAR WITH BLUE ORIGIN' and 'Watch an uncrewed journey highlighted with Blue Origin'.

Lyft

This screenshot shows the Lyft website. It features a photo of two people in a car with the text 'Rides in Minutes' and 'Take the wheel'. There are also buttons for 'SEEK MY CAR' and 'TAKE THE WHEEL'.

sUAS Registration

This screenshot shows the Small Unmanned Aircraft System (sUAS) Registration Service website. It features a drone image and the text 'Welcome to the Small Unmanned Aircraft System (sUAS) Registration Service'. There are buttons for 'REGISTER MY DRONE' and 'SEARCH MY DRONE'.

Finance

SEE ALL

GoCardless

This screenshot shows the GoCardless software interface. It features a navigation bar with 'Customers', 'Plans', 'Payments', 'Projects', and 'Jobs'. Below the navigation is a table with columns for 'Name', 'Status', 'Last payment', 'Last success', and 'Last failure'. The table lists several payment methods, including 'Bank Transfer' and 'Direct Debit'.

Alpha Bank

This screenshot shows the Alpha Bank mobile banking app. It features a dashboard with a 'Banking' section showing a balance of 11,111.00 and a 'My Alpha' section showing a balance of 11,111.00. There are also tabs for 'Investments', 'Loans', and 'Debt'.

PayPal Checkout

This screenshot shows the PayPal Checkout website. It features a banner with the text 'At PayPal, we put people at the center of everything we do.' Below the banner is a 'Who we are' section with a brief description of PayPal's mission.

Wells Fargo Rewards

This screenshot shows the Wells Fargo Rewards website. It features a banner with a woman smiling and the text 'Welcome to the Wells Fargo Rewards Program'. Below the banner is a 'Discover exciting features that fit your lifestyle' section.

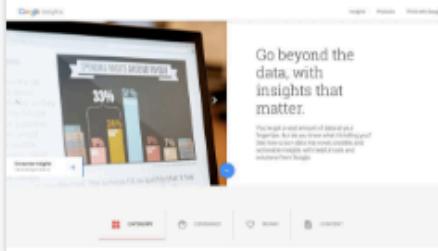
Business

SEE ALL

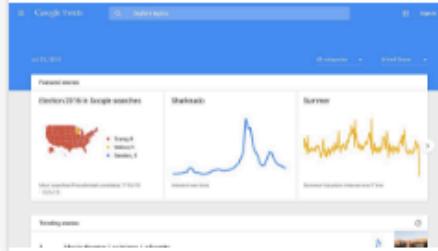
Staples



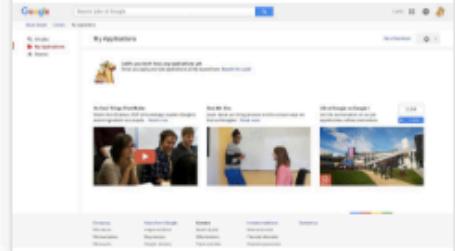
Google Insights



Google Trends



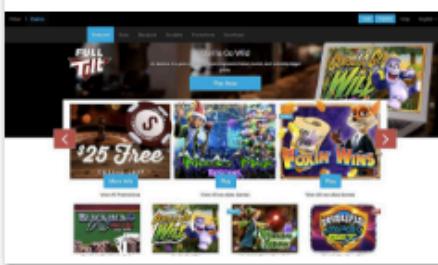
Google Careers



Entertainment

SEE ALL

Full Tilt



Google Star Wars



LEGO.com Star Wars



Lego



From the Community

SEE ALL

DevChat.tv



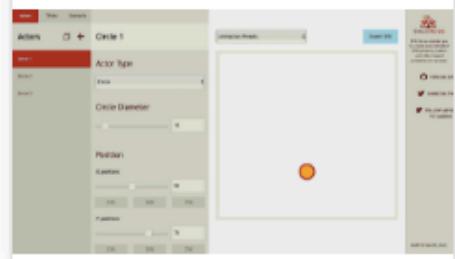
Che Armstrong



Provecta POS



SVG Circus





PRODUTOS E SERVIÇOS

ATENDIMENTO

SOBRE NÓS

BUSCAR

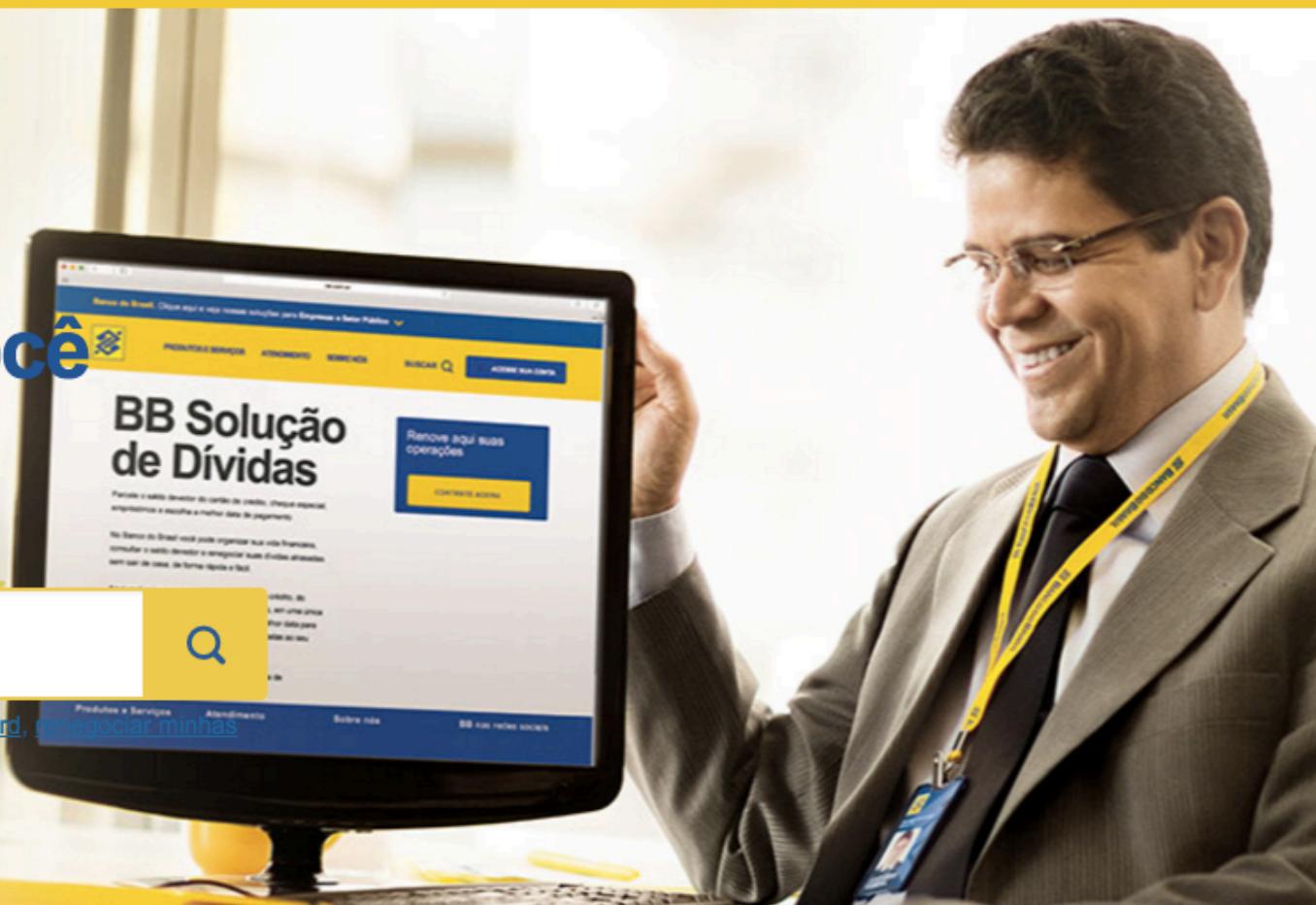
ACESSE SUA CONTA

Do que você precisa?

Estamos aqui para ajudar



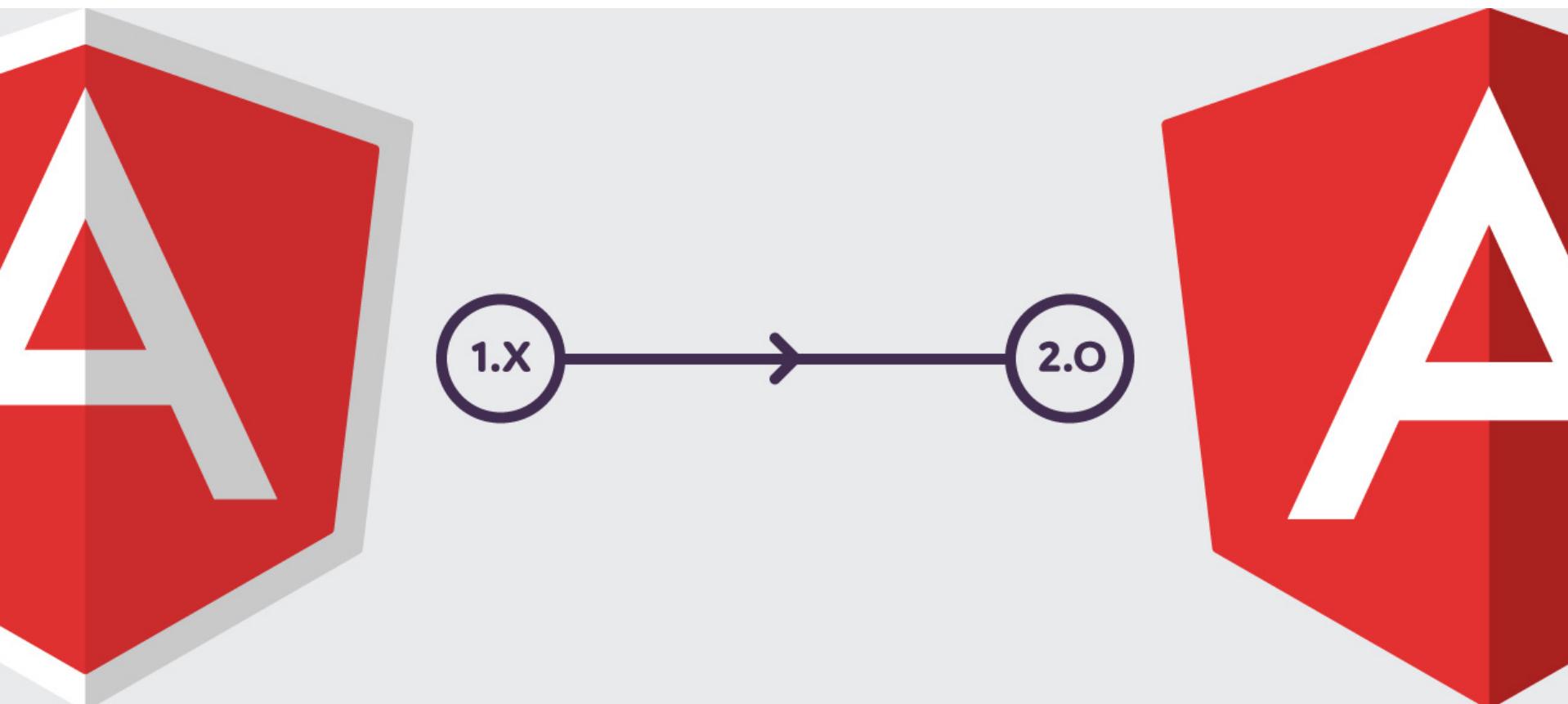
Mais buscados: [carro novo](#), [ouocard](#), [renegociar minhas dívidas](#)



Solução de dívidas

Gerencie suas finanças sem sair de casa: consulte e renegocie suas dívidas, de forma simples e rápida

VEJA AQUI



DIA 2

JavaScript

Parte II

Conhecimentos Básicos

JS

Back Forward

Home

Reload

Images

Open

Print

Find

Stop

Location: about:

[What's New!](#) [What's Cool!](#) [Handbook](#) [Net Search](#) [Net Directory](#) [Software](#)



NETSCAPE

Netscape Navigator™ Version 2.02

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JAVA COMPATIBLE

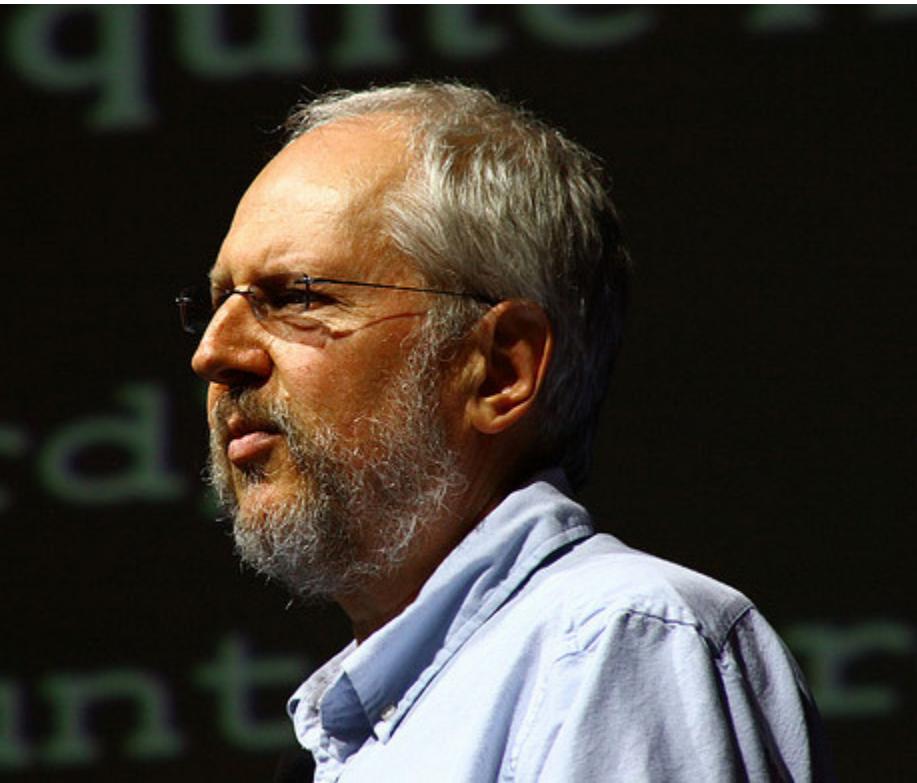
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Contains security software from RSA Data Security, Inc.
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This version supports International security with RSA Public Key Cryptography, MD2, MD5, RC4.

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JavaScript: The Good Parts



Douglas Crockford

Compartilhada publicamente - 10 de abr de 2015

I was trying to explain to someone the difference between Java and JavaScript. "It is like the difference between Star Trek and Star Wars."

Java is Star Trek. It was first, and it is all uniforms, regulations, and red alerts.
JavaScript is Star Wars. Grit, chaos, and mysticism.

Google

https://www.google.com.br

Tiago

Gmail Imagens

2

Brasil

Pesquisa Google Estou com sorte

Publicidade Negócios Sobre Privacidade Termos Configurações

Elements Console Sources Network Timeline Profiles Resources Security Audits AngularJS

top ▾ Preserve log

Console

Escreva um laço de repetição que faça 7 chamadas à função console.log e imprima o triângulo abaixo:

```
#  
##  
###  
####  
#####  
######  
#######
```

```
var a = '';  
while(a.length < 7) {  
    a=a + '#'  
    console.log(a);  
}
```

Escreva uma função min que recebe dois argumentos e retorna o menor:

> console.log(min(0,10));

< 0

> console.log(min(0,-10));

< -10

```
function min(a, b) {  
    return (a < b) ? a : b;  
}
```

```
1 function makePerson(first, last) {  
2     return {  
3         first: first,  
4         last: last  
5     };  
6 }  
7 function personFullName(person) {  
8     return person.first + ' ' + person.last;  
9 }  
10 function personFullNameReversed(person) {  
11     return person.last + ', ' + person.first;  
12 }  
13  
14 s = makePerson("Simon", "Willison");  
15 personFullName(s); // "Simon Willison"  
16 personFullNameReversed(s); // "Willison, Simon"
```

```
1 function makePerson(first, last) {  
2     return {  
3         first: first,  
4         last: last,  
5         fullName: function() {  
6             return this.first + ' ' + this.last;  
7         },  
8         fullNameReversed: function() {  
9             return this.last + ', ' + this.first;  
10        }  
11    };  
12 }  
13  
14 s = makePerson("Simon", "Willison")  
15 s.fullName(); // "Simon Willison"  
16 s.fullNameReversed(); // "Willison, Simon"
```

```
1 | s = makePerson("Simon", "Willison");
2 | var fullName = s.fullName;
3 | fullName(); // undefined undefined
```

```
1 function Person(first, last) {  
2     this.first = first;  
3     this.last = last;  
4     this.fullName = function() {  
5         return this.first + ' ' + this.last;  
6     };  
7     this.fullNameReversed = function() {  
8         return this.last + ', ' + this.first;  
9     };  
10 }  
11 var s = new Person("Simon", "Willison");
```

```
1 | function Person(first, last) {  
2 |   this.first = first;  
3 |   this.last = last;  
4 | }  
5 | Person.prototype.fullName = function fullName() {  
6 |   return this.first + ' ' + this.last;  
7 | };  
8 | Person.prototype.fullNameReversed = function fullNameReversed() {  
9 |   return this.last + ', ' + this.first;  
10|};
```

```
1 var s = "Simon";
2 s.reversed(); // TypeError on line 1: s.reversed is not a function
3
4 String.prototype.reversed = function reversed() {
5     var r = "";
6     for (var i = this.length - 1; i >= 0; i--) {
7         r += this[i];
8     }
9     return r;
10};
11
12 s.reversed(); // nomiS
```

Escreva uma função que recebe um argumento e retorna este argumento

```
<- identity(5)
```

```
-> 5
```

```
function identity(x) {  
  return x;  
}
```

Escreva duas funções que recebem dois argumentos, uma retorna a soma e a outra o produto

-> add(1, 3)

<- 4

-> mul(2, 3)

<- 6

```
function add(x, y) {  
    return x + y;  
}
```

```
function mul(x, y) {  
    return x * y;  
}
```

Escreva uma função que recebe um argumento e retorna uma função que retorna este argumento

-> identityf(5)();

<- 5

```
function identityf(x) {  
  return function() {  
    return identity(x);  
  };  
}
```

Escreva uma função que soma com duas invocações:

-> addf(5)(6)

<- 11

```
function addf(x) {  
  return function(y) {  
    return add(x, y);  
  };  
}
```

Escreva uma função que recebe uma função binária e a aciona após duas invocações:

-> var app = applyf(add)

-> app(5)(6);

<- 11

```
function applyf(f) {  
    return function(x) {  
        return function(y) {  
            return f(x, y);  
        };  
    };  
}
```

Utilizando a função ‘forEach’, imprima cada um dos elementos do array ‘a’ multiplicado por 2:

-> var a = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

```
5  console.log('Multiplicados por 2');
6  a.forEach(function (n) {
7      console.log(n*2);
8  });
```

Utilizando a função ‘map’, crie um novo array ‘quad’ onde cada elemento é o quadrado ($n \times n$) de cada elemento de ‘a’

-> var a = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

<- quad // [1, 4, 9, 16, 25, 36, 49, 64, 81, 100]

```
10  console.log('Quadrados');
11  var quad = a.map(function (n) {
12      return n*n;
13  });
14  console.log(quad);
```

Utilizando a função ‘filter’, crie um novo array ‘ímpar’ que possui os elementos ímpares de ‘a’:

-> var a = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

<- ímpar // [1, 3, 5, 7, 9]

```
console.log('Ímpares');
var ímpar = a.filter(function (n) {
    return n % 2 === 1;
});
console.log(ímpar);
```

Utilizando a função ‘reduce’, crie uma variável ‘soma’ que é a soma dos elementos de ‘a’:

-> var a = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

<- soma //55

```
console.log('Soma');
var soma = a.reduce(function (anterior, atual) {
    return anterior + atual;
}, 0);
console.log(soma);
```

Crie um a variável ‘somaPar’ que é a soma dos elementos pares de ‘a’:

-> var a = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
<- soma //30

```
console.log('Soma Pares');
var somaPar = a
.filter(function (n) {
    return n % 2 === 0;
})
.reduce(function (anterior, atual) {
    return anterior + atual;
}, 0);
console.log(somaPar);
```

DIA 3

full-stack JS, controllers

Cadastro Patrimônio

Funcionalidades

- Listar os bens cadastrados;
- Filtrar a lista de bens;
- Detalhar um bem cadastrado;
- Cadastrar um novo bem;
- Alterar um bem cadastrado;
- Remover um bem cadastrado;

Listagem de Bens

Lista dos bens cadastrados de: Barão de Mauá

Busca:

[Novo Bem](#)



Bem ID: I6bjUTXbYhv7V08d



[Palácio dos Buritis, sede do GDF](#)

Tipo: imovel

[Mais Detalhes](#)

[Alterar](#)

[Excluir](#)

Cadastro de Novo Bem

URL Foto

URL Foto

Descrição

Descrição

Móvel Imóvel

Salvar

Cancelar

Alterando o Bem: l6bjUTXbYhv7V08d

URL Foto

<http://bit.ly/imgburiti>

Descrição

Palácio dos Buritis, sede do GDF

Móvel Imóvel

Salvar

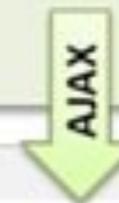
[Cancelar](#)



ANGULARJS

by Google

Client



express

Server



Database



Estrutura de Pastas da Aplicação

The screenshot shows the Visual Studio Code (VS Code) interface with a dark theme. The left sidebar (Explorer) lists the project structure:

- WORKING FILES
- CADASTRO-PATRIMONIO-NG
 - client
 - index.html
 - node_modules
 - server
 - app
 - api
 - index.js
 - routes
 - index.js
 - config
 - database.js
 - express.js
 - data.db
 - server.js
 - test
 - .editorconfig
 - .gitignore
 - .jscsrc
 - .jshintrc
 - LICENSE
 - package.json
 - README.md

```
1  {
2   "version": "0.1.0",
3   "name": "cadastro-patrimonio-ng",
4   "description": "Aplicação Exemplo de Cadastro de Patrimônio em AngularJS",
5   "license": "MIT",
6   "scripts": {
7     "start": "node server/server.js"
8   },
9   "dependencies": {
10    "body-parser": "^1.15.1",
11    "express": "^4.14.0",
12    "nedb": "1.8.0"
13  }
14}
15
```

Overview do Backend

server.js server

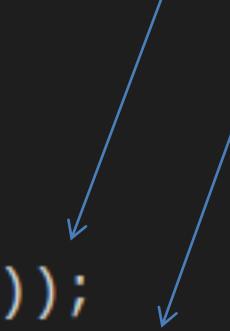
```
1 var http = require('http'),  
2     app = require('./config/express'),  
3     db = require('./config/database');  
4  
5 http.createServer(app).listen(3000, function () {  
6     console.log('Servidor escutando na porta: ' + this.address().port);  
7 });  
8
```

database.js server/config

```
1  var Datastore = require('nedb'),
2      dbName = 'server/data.db',
3      db;
4
5  if (!db) {
6      db = new Datastore({
7          filename: dbName,
8          autoload: true
9      });
10     console.log('Banco ' + dbName + ' pronto para uso');
11 }
12
13 module.exports = db;
```

express.js server/config

```
1 var express = require('express'),  
2     app = express(),  
3     bodyParser = require('body-parser'),  
4     routes = require('../app/routes');  
5  
6 app.use(express.static('./client_gabarito'));  
7 //app.use(express.static('./client_exercicios'));  
8 app.use(bodyParser.urlencoded({extended: true}));  
9 app.use(bodyParser.json());  
10  
11 routes(app);  
12  
13 module.exports = app;
```



index.js server/app/routes

```
1  var api = require('../api'),  
2      path = require('path');  
3  
4  module.exports = function (app) {  
5  
6      app.route('/api/v1/bens')  
7          .post(api.adiciona)  
8          .get(api.lista);  
9  
10     app.route('/api/v1/bens/:bemId')  
11         .delete(api.remove)  
12         .get(api.busca)  
13         .put(api.atualiza);  
14  
15     app.get('/api/v1/tipos', api.listaTipos);  
16     app.get('/api/v1/bens/tipo/:tipoId', api.listaPorTipo);  
17  
18     // habilita o HTML5MODE  
19     app.all('*', function (req, res) {  
20         res.sendFile(path.resolve('client_gabarito/index.html'));  
21     });  
22 };
```

```
1  var db = require('../config/database');
2
3  var api = {};
4
5  api.adiciona = function (req, res) {
6      db.insert(req.body, function (err, newDoc) {
7          if (err) {
8              return console.log(err);
9          }
10         console.log('Adicionado com sucesso: ' + newDoc._id);
11         res.json(newDoc._id);
12     });
13 };
14
15 api.busca = function (req, res) {
16     db.findOne({
17         _id: req.params.bemId
18     }, function (err, doc) {
19         if (err) {
20             return console.log(err);
21         }
22         res.json(doc);
23     });
24 };
```

Uma tela simples para testar o
servidor

- index.html client_gabarito

```
1  <!DOCTYPE html>
2  <html lang="pt-br">
3
4  <head>
5    <title>Cadastro de Patrimônio</title>
6    <meta charset="UTF-8">
7  </head>
8
9  <body>
10   <h1>Olá Cadastro de Patrimônio</h1>
11  </body>
12
13 </html>
```

Transformando um html em uma view
AngularJS

```
index.html client_gabarito
```

```
1  <!DOCTYPE html>
2  | <html lang="pt-br" ng-app="cadpat">1
3
4  | <head>
5    |   <title>Cadastro de Patrimônio</title>
6    |   <meta charset="UTF-8">
7    |   <script src="bower_components/angular/angular.js"></script>4
8    |   <script src="app/app.module.js"></script> 5
9  | </head>
10 |3
11 | <body ng-controller="ListagemController">
12 |   <h1>Olá Cadastro de Patrimônio</h1>
13 |   
    <h1>Olá Cadastro de Patrimônio!</h1>
    
    
39     <h1>Olá Cadastro de Patrimônio!</h1>
40     
41 </body>
```

Um pouco de Bootstrap para melhorar
a exibição da aplicação

```
<!-- jQuery -->
<script src="bower_components/jquery/dist/jquery.min.js"></script>

<!-- Bootstrap -->
<link href="bower_components/bootstrap/dist/css/bootstrap.min.css" rel="stylesheet">
<script src="bower_components/bootstrap/dist/js/bootstrap.min.js"></script>
```

```
24 <body ng-controller="ListagemController">
25     <div class="container">
26         <div class="page-header">
27             <h1>Listagem de Bens</h1>
28         </div>
29         <div ng-repeat="foto in fotos" class="row">
30             <div class="col-md-3">
31                 <a class="thumbnail">
32                     
33                 </a>
34             </div>
35         </div>
36     </div>
37 </body>
' style="height:300px; margin:0 auto;">
```



```
1 angular.module('cadpat', [])
2   .controller('ListagemController', function ($scope) {
3     $scope.bens = [
4       {
5         descricao: 'Prédio do Banco Central do Brasil – BACEN',
6         urlFoto: 'http://bit.ly/imgbacen'
7       },
8       {
9         descricao: 'Palácio dos Buritis, sede do GDF',
10        urlFoto: 'http://bit.ly/imgburiti'
11      },
12      {
13        descricao: 'Câmara dos deputados do DF',
14        urlFoto: 'http://bit.ly/imgcamara'
15      }
16    ];
17  });

```

```
24  <body ng-controller="ListagemController">
25      <div class="container">
26          <div class="page-header">
27              <h1>Listagem de Bens</h1>
28          </div>
29          <div ng-repeat="bem in bens" class="row">
30              <div class="col-md-3">
31                  <a class="thumbnail">
32                      
33                      <div class="caption">
34                          <h3>{{bem.descricao}}</h3>
35                      </div>
36                  </a>
37              </div>
38          </div>
39      </div>
40  </body>
```

```
24 <body ng-controller="ListagemController">
25     <div class="container">
26         <div class="page-header">
27             <h1>Listagem de Bens</h1>
28         </div>
29         <div class="row">
30             <!-- Barra Lateral -->
31             <div class="col-md-2">
32                 Busca: <input ng-model="criterio">
33             </div>
34
35             <!-- Conteúdo -->
36             <div class="col-md-10">
37                 <div ng-repeat="bem in bens | filter:criterio" class="row">
38                     <div class="col-md-3">
39                         <a class="thumbnail">
40                             
41                             <div class="caption">
42                                 <h3>{{bem.descricao}}</h3>
43                             </div>
44                         </a>
45                     </div>
46                 </div>
47             </div>
48         </div>
49     </div>
50 </body>
```

```
24  <body ng-controller="ListagemController">
25      <div class="container">
26          <div class="page-header">
27              <h1>Listagem de Bens</h1>
28          </div>
29          <div class="row">
30              <!-- Barra Lateral -->
31              <div class="col-md-2">
32                  Busca: <input ng-model="criterio">
33              </div>
34
35              <!-- Conteúdo -->
36              <div class="col-md-10">
37                  <div ng-repeat="bem in bens | filter:criterio" class="row">
38                      <div class="col-md-3">
39                          <a class="thumbnail">
40                              
41                              <div class="caption">
42                                  <h3 ng-bind="bem.descricao"></h3>
43                              </div>
44                          </a>
45                      </div>
46                  </div>
47              </div>
48          </div>
49      </div>
50  </body>
51  |
52 </html>
```

Listagem de Bens

Busca:



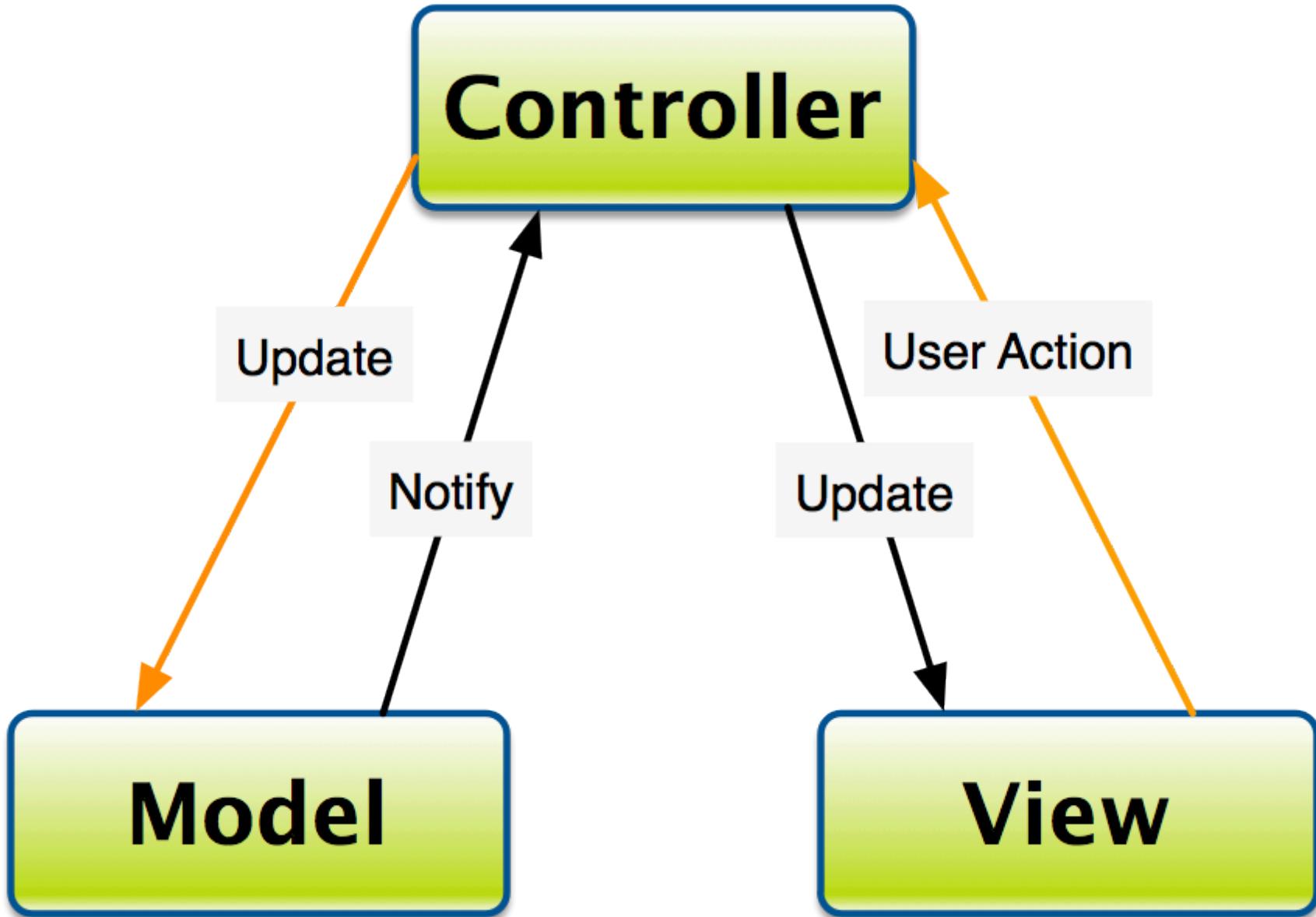
**Prédio do
Banco Central
do Brasil -
BACEN**

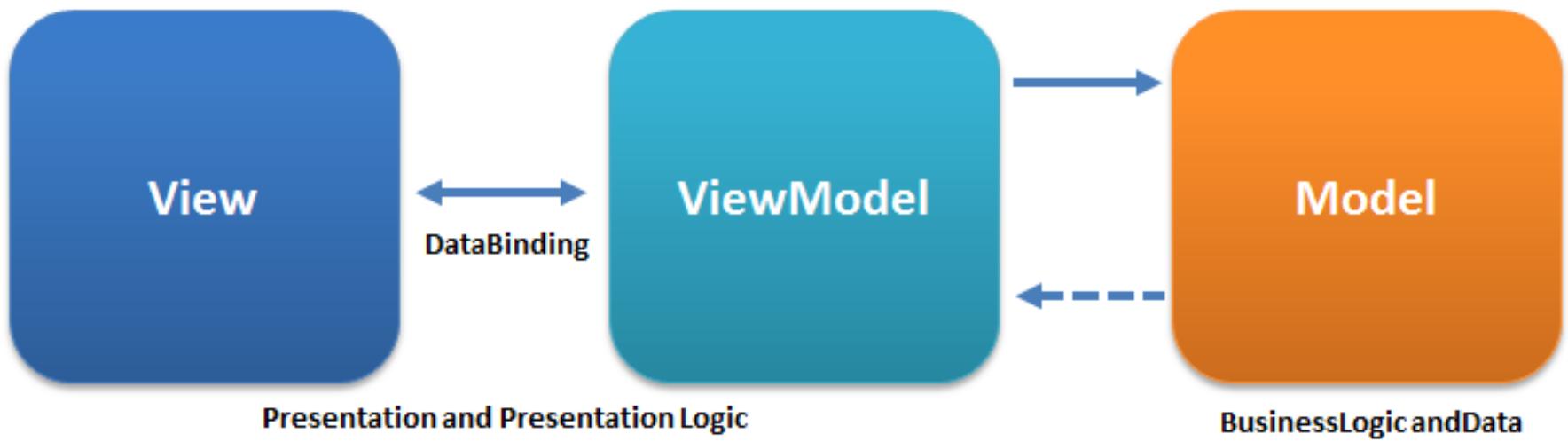


**Palácio dos
Buritis, sede do
GDF**



MVC - MVVM - MVW





DIA 4

Ferramentas de Debug para o AngularJS

localhost:3000/bens



Busca:

div.row::before 0px x 0px

Novo Bem



Bem ID: I6bjUTXbYhv7V08d

Elements Console Sources Network Timeline Profiles Resources Security Audits AngularJS

07

```
<!-- Conteúdo -->
<div class="col-md-10">
  <div class="row">
    <div class="col-md-6">
      <div ng-mouseenter="pause()" ng-mouseleave="play()" class="carousel ng-isolate-scope" ng-swipe-right="prev()" ng-swipe-left="next()" active="0">
        <div class="carousel-inner" ng-transclude>
          <!-- ngRepeat: bem in vm.bens -->
          <div ng-class="{
            'active': active
          }" class="item text-center ng-scope ng-isolate-scope" ng-transclude ng-repeat="bem in vm.bens" index="$index" style="...</div>
          <!-- end ngRepeat: bem in vm.bens -->
        <div ng-class="{
          'active': active
        }" class="item text-center ng-scope ng-isolate-scope active" ng-transclude ng-repeat="bem in vm.bens" index="$index" style=">
          
        </div>
      </div>
    </div>
  </div>

```

Styles

Filter

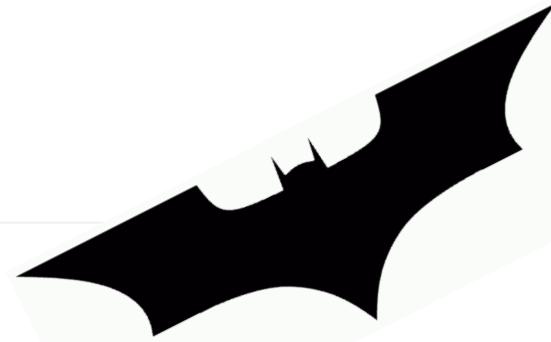
Computed Event Listeners

+ .cls

Listagem de Bens

Lista dos bens cadastrados de: Chico Buarque

Busca:

Novo Bem

Elements Console Sources Network Timeline Profiles Resources Security Audits AngularJS

AngularJS tab is selected.

Enable checkbox is checked.

Scopes panel shows:

- Enable (checkbox checked)
- Scopes
- Hints
- Performance (Alpha)

Code panel shows the following AngularJS code:

```
<ng-app="cadpat">
<ng-controller="AlertaController as vm">
<scope.$id=3>
<scope.$id=4>
<scope.$id=5>
<scope.$id=6>
<scope.$id=7>
<scope.$id=8>
<scope.$id=19>
<scope.$id=20>
<ng-repeat="slide in slides | orderBy:indexOfSlide track by $index"
<scope.$id=92>
<ng-repeat="slide in slides | orderBy:indexOfSlide track by $index"
<scope.$id=21>
<ng-repeat="bem in vm.bens">
<scope.$id=55>
<scope.$id=56>
<ng-repeat="bem in vm.bens">
<scope.$id=57>
<scope.$id=58>
<ng-repeat="bem in vm.bens">
<scope.$id=59>
```

Models panel shows the following object structure:

```
$id: 84
slide:
  slide:
    $id: 55
    index: 0
    active: false
    direction: "next"
  element:
    0: Object
    context:
      jQuery224098724380246491952:
        $scope:
          $id: 35
          bem: Object
          $index: 0
          $first: true
          $last: false
          $middle: false
          $even: true
          $odd: false
        $isolateScope:
```

Seguindo o guia de estilo de código de
John Papa

cadastro-patrimonio-ng/client/app/app.module.js

```
1 (function() {
2     'use strict';
3
4     angular.module('cadpat', ['bemControllers']);
5 })();
```

cadastro-patrimonio-ng/client/app/bem/bem.controllers.js

```
1 (function() {
2     'use strict';
3
4     angular
5         .module('bemControllers', [])
6         .controller('ListagemController', ListagemController);
7
8     ListagemController.$inject = [];
9     function ListagemController() {
10         var vm = this;
11         activate();
12
13         ///////////////////
14         function activate() {
15             vm.bens = [
16                 {
17                     descricao: 'Prédio do Banco Central do Brasil – BACEN',
18                     urlFoto: 'http://bit.ly/imgbacen'
19                 },
20                 {
21                     descricao: 'Palácio dos Buritis, sede do GDF',
22                     urlFoto: 'http://bit.ly/imgburiti'
23                 },
24                 {
25                     descricao: 'Câmara dos deputados do DF',
26                     urlFoto: 'http://bit.ly/imgcamara'
27                 }
28             ];
29         }
30     }
31 })(());
```

```
25 <body ng-controller="ListagemController as vm">
26     <div class="container">
27         <div class="page-header">
28             <h1>Listagem de Bens</h1>
29         </div>
30         <div class="row">
31             <!-- Barra Lateral -->
32             <div class="col-md-2">
33                 Busca: <input ng-model="criterio">
34             </div>
35
36             <!-- Conteúdo -->
37             <div class="col-md-10">
38                 <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
39                     <div class="col-md-3">
40                         <a class="thumbnail">
41                             
43                                 <h3 ng-bind="bem.descricao"></h3>
44                             </div>
45                         </a>
46                     </div>
47                 </div>
48             </div>
49         </div>
50     </div>
51 </body>
```

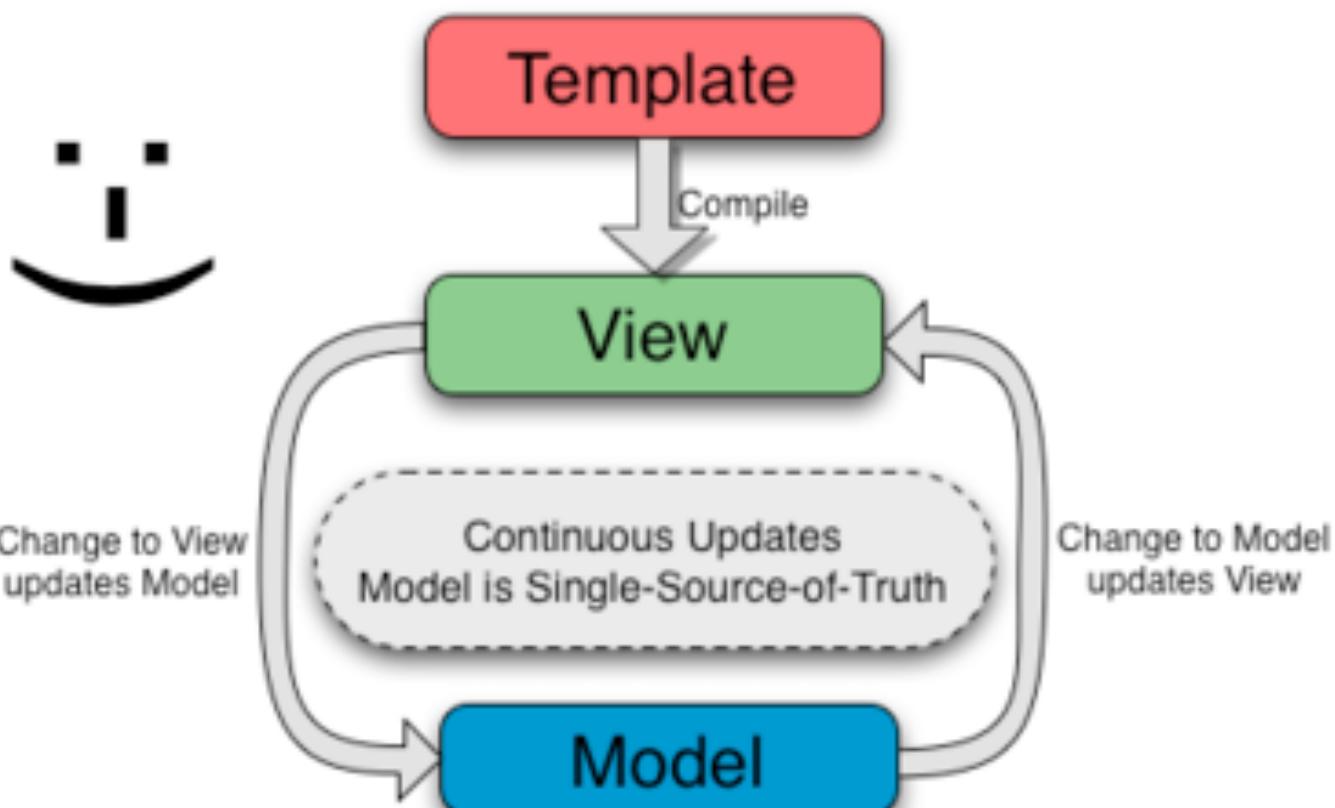
Buscando dados no servidor

```
8 | ListagemController.$inject = ['$http'];
9 | function ListagemController($http) {
10 |     var vm = this;
11 |
12 |     activate();
13 |
14 |     ///////////////////
15 |
16 |     function activate() {
17 |         vm.bens = $http.get('/api/v1/bens');
18 |     }
19 | }
```

```
8 | ListagemController.$inject = ['$http', '$window'];
9 | function ListagemController($http, $window) {
10|     var vm = this;
11|
12|     activate();
13|
14|     ///////////////////
15|
16|     function activate() {
17|         var promise = $http.get('/api/v1/bens');
18|         promise.then(function(response) {
19|             vm.bens = response.data;
20|         })
21|         .catch(function(error) {
22|             $window.alert(error);
23|         });
24|     }
25| }
26| })();
```

```
8 | ListagemController.$inject = ['$http', '$window'];
9 | function ListagemController($http, $window) {
10 |     var vm = this;
11 |
12 |     activate();
13 |
14 |     ///////////////////
15 |
16 |     function activate() {
17 |         $http.get('/api/v1/bens')
18 |             .success(function(response) {
19 |                 vm.bens = response;
20 |             })
21 |             .error(function(error) {
22 |                 $window.alert(error);
23 |             });
24 |     }
25 | }
```

Two-Way Data Binding



DIA 5

TypeScript

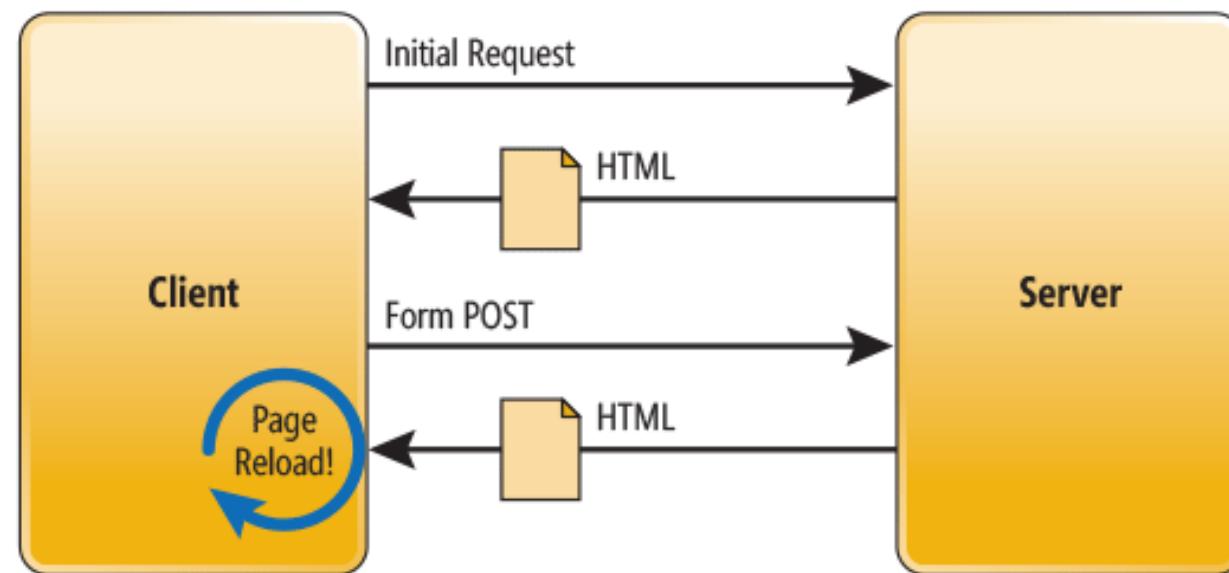
Parte III

Módulos, Serviços e

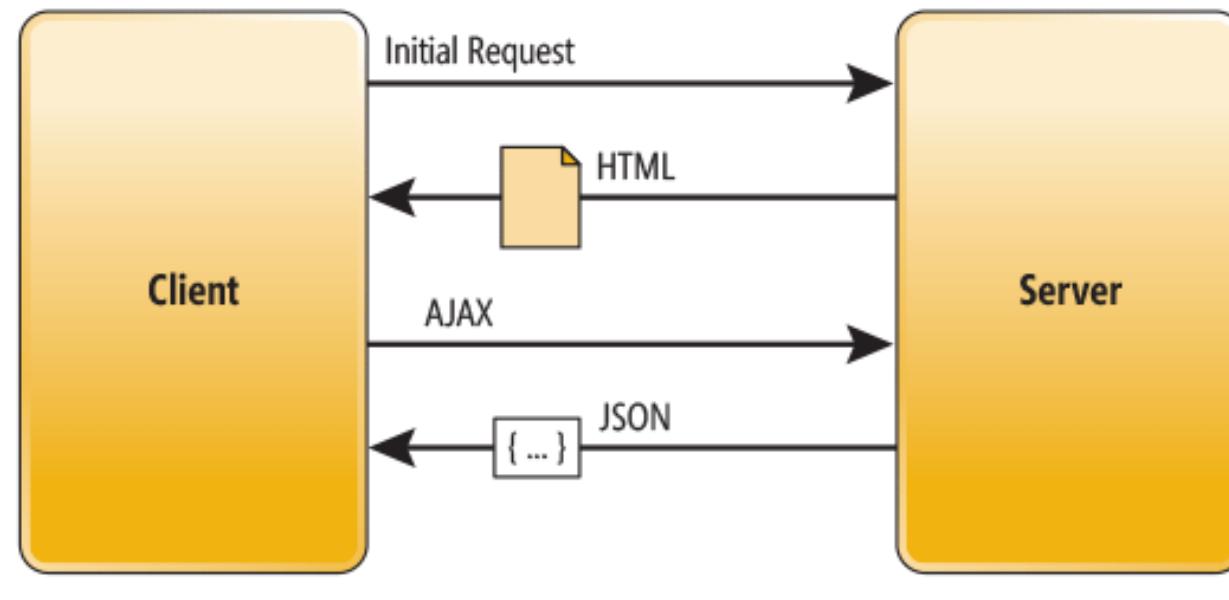
Roteamento

O que é uma SPA

Traditional Page Lifecycle

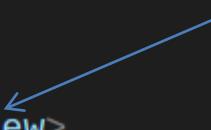


SPA Lifecycle



Trabalhando com rotas e partials

```
17    <!-- angular -->
18    <script src="bower_components/angular/angular.js"></script>
19    <script src="bower_components/angular-route/angular-route.js"></script>
20    <script src="app/app.module.js"></script>
21    <script src="app/app.config.js"></script> ←
22    <script src="app/bem/bem.controllers.js"></script>
23    <link href="styles/app.css" rel="stylesheet">
24
25  </head>
26
27  <body>
28    <div class="container" ng-view>
29    </div>
30  </body>
31
32  </html>
```



```
1 (function (angular, undefined) {  
2     'use strict';  
3     angular.module('cadpat', [  
4         'ngRoute', ←  
5         'bemControllers'  
6     ]);  
7 })(angular);
```

```
app.config.js client/app
1  (function (angular, undefined) {
2      'use strict';
3
4      angular.module('cadpat')
5          .config(config);
6
7      config.$inject = ['$routeProvider'];
8      function config($routeProvider) {
9          $routeProvider
10             .when('/bens', {
11                 templateUrl: 'app/bem/bem-lista.html',
12                 controller: 'ListagemController',
13                 controllerAs: 'vm'
14             })
15             .otherwise({
16                 redirectTo: '/bens'
17             });
18     }
19 })(angular);
```

bem-lista.html client/app/bem

```
1 <div class="page-header">
2     <h1>Listagem de Bens</h1>
3 </div>
4 <div class="row">
5     <!-- Barra Lateral -->
6     <div class="col-md-2">
7         Busca: <input ng-model="criterio">
8     </div>
9
10    <!-- Conteúdo -->
11    <div class="col-md-10">
12        <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
13            <div class="col-md-3">
14                <a class="thumbnail">
15                    
16                    <div class="caption">
17                        <h3 ng-bind="bem.descricao"></h3>
18                    </div>
19                </a>
20            </div>
21        </div>
22    </div>
23 </div>
```

Listagem de Bens

Busca:



Palácio dos
Buritis, sede do
GDF



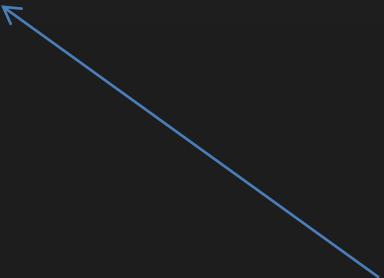
Prédio do Banco
Central do Brasil
- BACEN

Ativando o modo html5

```
... ...
1  (function (angular, undefined) {
2      'use strict';
3
4      angular.module('cadpat')
5          .config(config);
6
7      config.$inject = ['$routeProvider', '$locationProvider'];
8      function config($routeProvider, $locationProvider) {
9          $locationProvider.html5Mode(true);
10
11         $routeProvider
12             .when('/bens', {
13                 templateUrl: 'app/bem/bem-lista.html',
14                 controller: 'ListagemController',
15                 controllerAs: 'vm'
16             })
17             .otherwise({
18                 redirectTo: '/bens'
19             });
20     }
21 })(angular);
```



```
~  
4 <head>  
5     <meta charset="utf-8">  
6     <meta http-equiv="X-UA-Compatible" content="IE=edge">  
7     <meta name="viewport" content="width=device-width, initial-scale=1">  
8     <title>Cadastro de Patrimônio</title>  
9     <base href="/">
```





Listagem de Bens

Busca:



Palácio dos
Buritis, sede do
GDF



CRUD: Detalhar

```
app.module('cadpat')
```

```
1  (function (angular, undefined) {
2      'use strict';
3
4      angular.module('cadpat')
5          .config(config);
6
7      config.$inject = ['$routeProvider', '$locationProvider'];
8      function config($routeProvider, $locationProvider) {
9          $locationProvider.html5Mode(true);
10
11         $routeProvider
12             .when('/bens', {
13                 templateUrl: 'app/bem/bem-lista.html',
14                 controller: 'ListagemController',
15                 controllerAs: 'vm'
16             })
17             .when('/bens/:id', { -----
18                 templateUrl: 'app/bem/bem-detalhe.html',
19                 controller: 'DetalheController',
20                 controllerAs: 'vm'
21             })
22             .otherwise({
23                 redirectTo: '/bens'
24             });
25     }
26 })(angular);
```

```
1 (function (angular, undefined) {
2     'use strict';
3
4     angular
5         .module('bemControllers', [])
6         .controller('ListagemController', ListagemController)
7         .controller('DetalheController', DetalheController) ←
8
9     DetalheController.$inject = ['$http', '$routeParams', '$window'];
10    function DetalheController($http, $routeParams, $window) {
11        var vm = this;
12
13        activate();
14
15        ///////////////////
16
17        function activate() {
18            $http.get('/api/v1/bens/' + $routeParams.id)
19                .success(function (response) {
20                    vm.bem = response;
21                })
22                .error(function (message) {
23                    $window.alert(message);
24                });
25        }
26    }
},
```

```
1  <div class="page-header">
2      <h1>Detalhamento de Bem: {{vm.bem._id}}</h1>
3  </div>
4  <div class="row">
5      <!-- Conteúdo -->
6      <div class="col-md-12">
7          <div class="row">
8              <div class="col-md-3">
9                  <div class="thumbnail">
10                     
11                     <div class="caption">
12                         <h3>{{vm.bem.descricao}}</h3>
13                     </div>
14                     <a href="/">Voltar</a>
15                 </div>
16             </div>
17         </div>
18     </div>
19 </div>
```

CRUD: Inclusão

```
1 <div class="page-header">
2     <h1>Listagem de Bens</h1>
3 </div>
4 <div class="row">
5     <!-- Barra Lateral -->
6     <div class="col-md-2">
7         Busca: <input ng-model="criterio">
8         <a href="/bens/incluir" class="btn btn-primary" role="button">Novo Bem</a>
9     </div>
10
11    <!-- Conteúdo -->
12    <div class="col-md-10">
13        <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
14            <div class="col-md-3">
15                <a class="thumbnail" href="/bens/{{bem.id}}">
16                    
17                    <div class="caption">
18                        <h3>{{bem.descricao}}</h3>
19                    </div>
20                </a>
21            </div>
22        </div>
23    </div>
24 </div>
```

```
1 <form ng-submit="vm.salvar()">
2     <div class="form-group">
3         <label for="urlFoto">URL Foto</label>
4         <input type="text" ng-model="vm.bem.urlFoto"
5                 class="form-control" id="urlFoto" placeholder="URL Foto">
6     </div>
7     <div class="form-group">
8         <label for="descricao">Descrição</label>
9         <input type="text" ng-model="vm.bem.descricao"
10            class="form-control" id="descricao" placeholder="Descrição">
11     </div>
12     <button type="submit" class="btn btn-primary">Salvar</button>
13     <a href="/bens" class="btn btn-default">Cancelar</a>
14 </form>
```

```
4 angular
5     .module('bemControllers', [])
6     .controller('ListagemController', ListagemController)
7     .controller('DetalheController', DetalheController)
8     .controller('IncluirController', IncluirController);
9
10
11 IncluirController.$inject = ['$http', '$location', '$window'];
12 function IncluirController($http, $location, $window) {
13     var vm = this;
14     vm.bem = {};
15     vm.salvar = salvar;
16
17     ///////////////////
18
19     function salvar() {
20         $http.post('/api/v1/bens', vm.bem)
21             .success(function (response) {
22                 $window.alert('Bem incluído com sucesso');
23                 $location.path('/bens');
24             })
25             .error(function (message) {
26                 $window.alert(message);
27             });
28     }
29 }
```

```
1 (function (angular, undefined) {
2     'use strict';
3
4     angular.module('cadpat')
5         .config(config);
6
7     config.$inject = ['$routeProvider', '$locationProvider'];
8     function config($routeProvider, $locationProvider) {
9         $locationProvider.html5Mode(true);
10
11         $routeProvider
12             .when('/bens', {
13                 templateUrl: 'app/bem/bem-lista.html',
14                 controller: 'ListagemController',
15                 controllerAs: 'vm'
16             })
17             .when('/bens/incluir', { ←
18                 templateUrl: 'app/bem/bem-mantem.html',
19                 controller: 'IncluirController',
20                 controllerAs: 'vm'
21             })
22             .when('/bens/:id', {
23                 templateUrl: 'app/bem/bem-detalhe.html',
24                 controller: 'DetalheController',
25                 controllerAs: 'vm'
26             })
27             .otherwise({
28                 redirectTo: '/bens'
29             });
30     }
}
```

```
1 <form novalidate name="frmbem" ng-submit="vm.salvar()">
2     <div class="form-group">
3         <label for="urlFoto">URL Foto</label>
4         <input type="text" name="urlFoto" ng-model="vm.bem.urlFoto" required
5             class="form-control" id="urlFoto" placeholder="URL Foto">
6         <span ng-show="frmbem.urlFoto.$dirty && frmbem.urlFoto.$error.required"
7             class="form-control alert-danger">
8             URL da foto não informada
9         </span>
10    </div>
11    <div class="form-group">
12        <label for="descricao">Descrição</label>
13        <input type="text" name="descricao" ng-model="vm.bem.descricao" required minlength="10"
14            class="form-control" id="descricao" placeholder="Descrição">
15        <span ng-show="frmbem.descricao.$dirty && frmbem.descricao.$error.required"
16            class="form-control alert-danger">
17            descrição não informada
18        </span>
19        <span ng-show="frmbem.descricao.$dirty && frmbem.descricao.$error.minlength"
20            class="form-control alert-danger">
21            descrição deve ter no mínimo de 10 caracteres
22        </span>
23    </div>
24    <button type="submit" class="btn btn-primary" ng-disabled="frmbem.$invalid">Salvar</button>
25    <a href="/bens" class="btn btn-default">Cancelar</a>
26 </form>
```

DIA 6

Diretivas

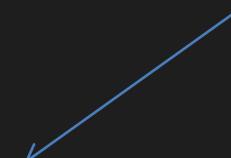
Acessando o objeto do Fomulário pelo Controller

```
3  </div>
4  <form novalidate name="vm.frmbem" ng-submit="vm.salvar()">
5      <div class="form-group">
6          <label for="urlFoto">URL Foto</label>
7          <input type="text" name="urlFoto" ng-model="vm.bem.urlFoto" required
8              class="form-control" id="urlFoto" placeholder="URL Foto">
9          <span ng-show="vm.frmbem.urlFoto.$dirty && vm.frmbem.urlFoto.$error.required"
10             class="form-control alert-danger">
11                 URL da foto não informada
12             </span>
13     </div>
14     <div class="form-group">
15         <label for="descricao">Descrição</label>
16         <input type="text" name="descricao" ng-model="vm.bem.descricao" required minlength="10"
17             class="form-control" id="descricao" placeholder="Descrição">
18         <span ng-show="vm.frmbem.descricao.$dirty && vm.frmbem.descricao.$error.required"
19             class="form-control alert-danger">
20                 descrição não informada
21             </span>
22         <span ng-show="vm.frmbem.descricao.$dirty && vm.frmbem.descricao.$error.minlength"
23             class="form-control alert-danger">
24                 descrição deve ter no mínimo de 10 caracteres
25             </span>
26     </div>
27     <button type="submit" class="btn btn-primary" ng-disabled="vm.frmbem.$invalid">Salvar</button>
28     <a href="/bens" class="btn btn-default">Cancelar</a>
29 </form>
```

```
48 //////////////////////////////////////////////////////////////////  
49  
50     function salvar() {  
51         if (vm.frmbem.$valid) {  
52             $http.post('/api/v1/bens', vm.bem)  
53                 .success(function (response) {  
54                     $window.alert('Bem incluído com sucesso');  
55                     $location.path('/bens');  
56                 })  
57                 .error(function (message) {  
58                     $window.alert(message);  
59                 });  
60     }  
61 }  
62 }
```

CRUD: Alteração

```
1 <div class="page-header">
2     <h1>Listagem de Bens</h1>
3 </div>
4 <div class="row">
5     <!-- Barra Lateral -->
6     <div class="col-md-2">
7         Busca: <input ng-model="criterio">
8         <a href="/bens/incluir" class="btn btn-primary" role="button">Novo Bem</a>
9     </div>
10
11     <!-- Conteúdo -->
12     <div class="col-md-10">
13         <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
14             <div class="col-md-3">
15                 <div class="thumbnail">
16                     <a href="/bens/{{bem.id}}">
17                         
18                         <div class="caption">
19                             <h3>{{bem.descricao}}</h3>
20                         </div>
21                     </a>
22                     <a ng-href="{{'/bens/alterar/' + bem._id}}" 
23                         class="btn btn-primary" role="button">Alterar</a>
24                 </div>
25             </div>
26         </div>
27     </div>
28 </div>
```



```
1 <div ng-show="vm.bem._id" class="page-header">
2     <h1>Alterando o Bem: {{vm.bem._id}}</h1> ←
3 </div>
4 <form novalidate name="frmBem" ng-submit="vm.salvar()">
5     <div class="form-group">
6         <label for="urlFoto">URL Foto</label>
7         <input type="text" name="urlFoto" ng-model="vm.bem.urlFoto" required
8             class="form-control" id="urlFoto" placeholder="URL Foto">
9         <span ng-show="frmBem.urlFoto.$dirty && frmBem.urlFoto.$error.required"
10            class="form-control alert-danger">
11             URL da foto não informada
12         </span>
13     </div>
14     <div class="form-group">
15         <label for="descricao">Descrição</label>
16         <input type="text" name="descricao" ng-model="vm.bem.descricao" required minlength="10"
17             class="form-control" id="descricao" placeholder="Descrição">
18         <span ng-show="frmBem.descricao.$dirty && frmBem.descricao.$error.required"
19            class="form-control alert-danger">
20             descrição não informada
21         </span>
22         <span ng-show="frmBem.descricao.$dirty && frmBem.descricao.$error.minlength"
23            class="form-control alert-danger">
24             descrição deve ter no mínimo de 10 caracteres
25         </span>
26     </div>
27     <button type="submit" class="btn btn-primary" ng-disabled="frmBem.$invalid">Salvar</button>
28     <a href="/bens" class="btn btn-default">Cancelar</a>
29 </form>
```

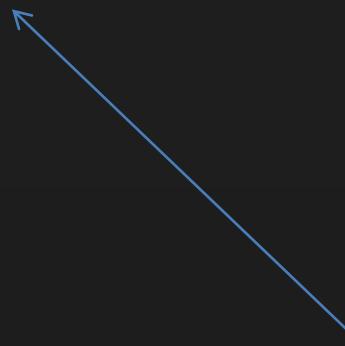
```
7 config.$inject = ['$routeProvider', '$locationProvider'];
8 function config($routeProvider, $locationProvider) {
9     $locationProvider.html5Mode(true);
10
11     $routeProvider
12         .when('/bens', {
13             templateUrl: 'app/bem/bem-lista.html',
14             controller: 'ListagemController',
15             controllerAs: 'vm'
16         })
17         .when('/bens/incluir', {
18             templateUrl: 'app/bem/bem-mantem.html',
19             controller: 'IncluirController',
20             controllerAs: 'vm'
21         })
22         .when('/bens/alterar/:id', { ←
23             templateUrl: 'app/bem/bem-mantem.html',
24             controller: 'AlterarController',
25             controllerAs: 'vm'
26         })
27         .when('/bens/:id', {
28             templateUrl: 'app/bem/bem-detalhe.html',
29             controller: 'DetalheController',
30             controllerAs: 'vm'
31         })
32         .otherwise({
33             redirectTo: '/bens'
34         });
35     }

```

```
4 angular
5     .module('bemControllers', [])
6     .controller('ListagemController', ListagemController)
7     .controller('DetalheController', DetalheController)
8     .controller('IncluirController', IncluirController)
9     .controller('AlterarController', AlterarController);
10
11 AlterarController.$inject = ['$http', '$location', '$routeParams', '$window'];
12 function AlterarController($http, $location, $routeParams, $window) {
13     var vm = this;
14     vm.salvar = salvar;
15
16     activate();
17
18     ///////////////////
19
20     function activate() {
21         $http.get('/api/v1/bens/' + $routeParams.id)
22             .success(function (response) {
23                 vm.bem = response;
24             })
25             .error(function (message) {
26                 $window.alert(message);
27             });
28     }
29
30     function salvar() {
31         $http.put('/api/v1/bens/' + vm.bem._id, vm.bem)
32             .success(function (response) {
33                 $window.alert('Bem alterado com sucesso');
34                 $location.path('/bens');
35             })
36             .error(function (message) {
37                 $window.alert(message);
38             });
39     }
40 }
```

A última operação do CRUD: Remoção

```
~  
11     <!-- Conteúdo -->  
12     <div class="col-md-10">  
13         <div ng-repeat="bem in vm.bens | filter:criterio" class="row">  
14             <div class="col-md-3">  
15                 <div class="thumbnail">  
16                     <a href="/bens/{{bem.id}}>  
17                           
19                             <h3>{{bem.descricao}}</h3>  
20                         </div>  
21                     </a>  
22                     <a ng-href="{{'/bens/alterar/' + bem._id}}>  
23                         class="btn btn-primary" role="button">Alterar</a>  
24                     <button ng-click="vm.excluir(bem._id)">  
25                         class="btn btn-default" role="button">Excluir</a>  
26                 </div>  
27             </div>  
28         </div>  
29     </div>
```



```
81 ListagemController.$inject = ['$http', '$window'];
82 function ListagemController($http, $window) {
83     var vm = this;
84
85     vm.excluir = excluir;
86
87     activate();
88
89     ///////////////////
90
91     function activate() {
92         $http.get('/api/v1/bens')
93             .success(function (response) {
94                 vm.bens = response;
95             })
96             .error(function (message) {
97                 $window.alert(message);
98             });
99     }
100
101     function excluir(id) {
102         if(!$window.confirm('Confirma a exclusão do bem id: ' + id + '?')) {
103             return;
104         }
105         $http.delete('/api/v1/bens/' + id)
106             .success(function (response) {
107                 $window.alert('Bem excluído com sucesso!');
108                 activate();
109             })
110             .error(function (message) {
111                 $window.alert(message);
112             });
113     }
114 }
```

Criando um Serviço Customizado

```
1 (function(angular, undefined) {
2     'use strict';
3
4     angular
5         .module('cadpatServices', [])
6         .factory('bemService', bemService);
7
8     bemService.$inject = ['$resource'];
9
10    function bemService($resource) {
11        return $resource('/api/v1/bens/:id', null, {
12            update: {
13                method: 'PUT'
14            },
15        });
16    }
17 })(angular);
```

```
1 (function (angular, undefined) {  
2     'use strict';  
3     angular.module('cadpat', [  
4         'ngResource',  
5         'ngRoute',  
6         'cadpatFilters',  
7         'cadpatServices',  
8         'bemControllers'  
9     ]);  
10 })(angular);
```

```
26
27      <script src="app/app.module.js"></script>
28      <script src="app/app.config.js"></script>
29      <script src="app/app.filters.js"></script>
30 |      <script src="app/app.services.js"></script>
31      <script src="app/bem/bem.controllers.js"></script>
```

```
90 |     ListagemController.$inject = ['$window', 'bemService'];
91 |
92 |     function ListagemController($window, bemService) {
93 |         var vm = this;
94 |
95 |         vm.excluir = excluir;
96 |
97 |         activate();
98 |
99 |         ///////////////////
100 |
101 |         function activate() {
102 |             bemService.query(function(bens) {
103 |                 vm.bens = bens;
104 |             },
105 |             function(error) {
106 |                 $window.alert(error);
107 |             });
108 |         }
109 |     }
110 | }
```

```
110     function excluir(id) {
111         if (!$window.confirm('Confirma a exclusão do bem id: ' + id + '?')) {
112             return;
113         }
114
115         bemService.delete({
116             id: id,
117         }, function() {
118             $window.alert('Bem excluído com sucesso!');
119             activate();
120         }, function(erro) {
121             $window.alert(erro);
122         });
123     }
124 }
```

```
09
70 DetalheController.$inject = ['$routeParams', '$window', 'bemService'];
71
72 function DetalheController($routeParams, $window, bemService) {
73     var vm = this;
74
75     activate();
76
77     /////////////////////
78
79     function activate() {
80         bemService.get({
81             id: $routeParams.id,
82         }, function(bem) {
83             vm.bem = bem;
84         }, function(error) {
85             $window.alert(error);
86         });
87     }
88 }
```

```
48 |     function IncluirController($location, $window, bemService) {
49 |         var vm = this;
50 |         vm.bem = {};
51 |         vm.salvar = salvar;
52 |
53 |         ///////////////////
54 |
55 |         function salvar() {
56 |             if (vm.frmbem.$valid) {
57 |                 bemService.save(
58 |                     vm.bem,
59 |                     function() {
60 |                         $window.alert('Bem incluído com sucesso');
61 |                         $location.path('/bens');
62 |                     },
63 |                     function(error) {
64 |                         $window.alert(error);
65 |                     });
66 |             }
67 |         }
68 |     }
```

```
13 |     function AlterarController($location, $routeParams, $window, bemService) {
14 |         var vm = this;
15 |         vm.salvar = salvar;
16 |
17 |         activate();
18 |
19 |         ///////////////
20 |
21 |         function activate() {
22 |             bemService.get({
23 |                 id: $routeParams.id,
24 |             }, function(bem) {
25 |                 vm.bem = bem;
26 |             }, function(error) {
27 |                 $window.alert(error);
28 |             });
29 |         }
30 |
31 |         function salvar() {
32 |             bemService.update({
33 |                 id: $routeParams.id,
34 |             },
35 |             vm.bem,
36 |             function() {
37 |                 $window.alert('Bem alterado com sucesso');
38 |                 $location.path('/bens');
39 |             },
40 |             function(error) {
41 |                 $window.alert(error);
42 |             });
43 |         }
44 |     }
45 | }
```

Criando um Filtro Customizado

```
1  <div class="page-header">
2      <h1>Listagem de Bens</h1>
3  </div>
4  <div class="row">
5      <!-- Barra Lateral -->
6      <div class="col-md-2">
7          Busca: <input ng-model="criterio">
8          <a href="/bens/incluir" class="btn btn-primary" role="button">Novo Bem</a>
9      </div>
10
11     <!-- Conteúdo -->
12     <div class="col-md-10">
13         <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
14             <div class="col-md-3">
15                 <div class="thumbnail">
16                     <a href="/bens/{{bem._id}}">
17                         
18                         <div class="caption">
19                             <h3>{{bem.descricao | maiusculo}}</h3>|-----^
20                         </div>
21                     </a>
22                     <a ng-href="{{'/bens/alterar/' + bem._id}}"
23                         class="btn btn-primary" role="button">Alterar</a>
24                     <button ng-click="vm.excluir(bem._id)"
25                         class="btn btn-default" role="button">Excluir</a>
26                 </div>
27             </div>
28         </div>
29     </div>
30 </div>
```

```
1  (function() {
2    'use strict';
3
4    angular
5      .module('cadpatFilters', [])
6      .filter('maiusculo', maiusculo);
7
8    maiusculo.$inject = [];
9
10   function maiusculo() {
11     return function(input) {
12       return input.toUpperCase();
13     };
14   }
15 })();
```

```
17    <!-- angular.js -->
18    <script src="bower_components/angular/angular.js"></script>
19    <script src="bower_components/angular-animate/angular-animate.js"></script>
20    <script src="bower_components/angular-route/angular-route.js"></script>
21
22    <!-- angular ui-bootstrap -->
23    <link href="bower_components/angular-bootstrap/ui-bootstrap-csp.css" rel="stylesheet">
24    <script src="bower_components/angular-bootstrap/ui-bootstrap-tpls.js"></script>
25
26    <script src="app/app.module.js"></script>
27    <script src="app/app.config.js"></script>
28    <script src="app/app.filters.js"></script> ←
29    <script src="app/bem/bem.controllers.js"></script>
```

```
1  (function (angular, undefined) {  
2      'use strict';  
3      angular.module('cadpat', [  
4          'ngRoute',  
5          'cadpatFilters', ←  
6          'bemControllers'  
7      ]);  
8  })(angular);
```

Parte IV

TypeScript

TypeScript



TypeScript

- types
- annotations

ES6

- classes
- modules

ES5

Experiências em TS

```
1 function saudar(pessoa) {  
2     return 'Olá, ' + pessoa;  
3 }  
4 var usuario = 'Mundo';  
5 console.log(saudar(usuario));
```

```
1 function saudar(pessoa: string) {  
2     return 'Olá, ' + pessoa;  
3 }  
4  
5 var usuario = 100;  
6  
7 console.log(saudar(usuario));
```

```
1 interface Pessoa {  
2     primeiroNome: string;  
3     ultimoNome: string;  
4 }  
5  
6 function saudar(pessoa: Pessoa) {  
7     return 'Olá, ' + pessoa.primeiroNome + ' ' + pessoa.ultimoNome;  
8 }  
9  
10 var usuario = { primeiroNome: 'José', ultimoNome: 'Silva' };  
11  
12 console.log(saudar(usuario));
```

```
1 class Estudante {
2     nomeCompleto: string;
3     constructor(public primeiroNome, public nomeMeio, public ultimoNome) {
4         this.nomeCompleto = primeiroNome + ' ' + nomeMeio + ' ' + ultimoNome;
5     }
6 }
7
8 interface Pessoa {
9     primeiroNome: string;
10    ultimoNome: string;
11 }
12
13 function saudar(pessoa: Pessoa) {
14     return 'Olá, ' + pessoa.primeiroNome + ' ' + pessoa.ultimoNome;
15 }
16
17 var usuario = new Estudante('Arthur', 'C.', 'Clark');
18
19 console.log(saudar(usuario));
```

```
1 class Pessoa {
2     constructor(public primeiroNome: string, public ultimoNome: string) {
3     }
4 }
5
6 class Estudante extends Pessoa {
7     nomeCompleto: string;
8     constructor(primeiroNome, public nomeMeio: string, ultimoNome) {
9         super(primeiroNome, ultimoNome);
10        this.nomeCompleto = this.primeiroNome + ' ' + nomeMeio +
11            ' ' + this.ultimoNome;
12    }
13 }
14
15 function saudar(pessoa: Pessoa): string {
16     return 'Olá, ' + pessoa.primeiroNome + ' ' + pessoa.ultimoNome;
17 }
18
19 var usuario = new Estudante('Arthur', 'C.', 'Clark');
20
21 console.log(saudar(usuario));
```

```
1 var __extends = (this && this.__extends) || function (d, b) {
2     for (var p in b) if (b.hasOwnProperty(p)) d[p] = b[p];
3     function __() { this.constructor = d; }
4     d.prototype = b === null ? Object.create(b) : (__.prototype = b.prototype, new __());
5 };
6 var Pessoa = (function () {
7     function Pessoa(primeiroNome, ultimoNome) {
8         this.primeiroNome = primeiroNome;
9         this.ultimoNome = ultimoNome;
10    }
11    return Pessoa;
12})();
13 var Estudante = (function (_super) {
14     __extends(Estudante, _super);
15     function Estudante(primeiroNome, nomeMeio, ultimoNome) {
16         _super.call(this, primeiroNome, ultimoNome);
17         this.nomeMeio = nomeMeio;
18         this.nomeCompleto = this.primeiroNome + ' ' + nomeMeio +
19             ' ' + this.ultimoNome;
20     }
21     return Estudante;
22 })(Pessoa);
23 function saudar(pessoa) {
24     return 'Olá, ' + pessoa.primeiroNome + ' ' + pessoa.ultimoNome;
25 }
26 var usuario = new Estudante('Arthur', 'C.', 'Clark');
27 console.log(saudar(usuario));
```

Como o compilador irá reconhecer o
AngularJS 1 se ele não foi escrito em
Typescript?

typings.json

```
1  {
2    "globalDependencies": {
3      "angular": "registry:dt/angular#1.5.0+20160619025852",
4      "angular-animate": "registry:dt/angular-animate#1.5.0+20160614091201",
5      "angular-mocks": "registry:dt/angular-mocks#1.5.0+20160608104721",
6      "angular-resource": "registry:dt/angular-resource#1.5.0+20160613142217",
7      "angular-route": "registry:dt/angular-route#1.3.0+20160317120654",
8      "bootstrap": "registry:dt/bootstrap#3.3.5+20160619023404",
9      "jquery": "registry:dt/jquery#1.10.0+20160417213236"
10    }
11  }
```

WORKING FILES

- index.html client_gabarito
- bem.controllers.js client_gabarito/a...
- express.js server/config
- index.js server/app/routes
- .bowerrc
- bem.controllers.ts client_gabarito/a...
- bem-mantem.html client_gabarito/a...
- bem-lista.html client_gabarito/app/b...
- app.module.js client_gabarito/app

CADASTRO-PATRIMONIO-NG

- ▷ client_exercicios
- ▷ client_gabarito
- ▷ exercicios
- ▷ node_modules
- ▷ referencias
- ▷ server
- ▷ test

typings

- ▷ globals
- ▷ angular

- index.d.ts

- typings.json

▷ angular-animate

- index.d.ts

- typings.json

▷ angular-mocks

- index.d.ts

- typings.json

▷ angular-resource

▷ angular-route

▷ bootstrap

▷ jquery

```
20 declare namespace angular {
21
22     // not directly implemented, but ensures that constructed class implements $get
23     interface IServiceProviderClass {
24         new (...args: any[]): IServiceProvider;
25     }
26
27     interface IServiceProviderFactory {
28         (...args: any[]): IServiceProvider;
29     }
30
31     // All service providers extend this interface
32     interface IServiceProvider {
33         $get: any;
34     }
35
36     interface IAngularBootstrapConfig {
37         strictDi?: boolean;
38         debugInfoEnabled?: boolean;
39     }
40
41     /////////////////////////////////
42     // AngularStatic
43     // see http://docs.angularjs.org/api
44     ///////////////////////////////
45     interface IAngularStatic {
46         bind(context: any, fn: Function, ...args: any[]): Function;
```

DIA 7

Components

Configurando o compilador TS

tsconfig.json

```
1  {
2      "compilerOptions": {
3          "target": "es5",
4          "watch": true
5      },
6      "exclude": [
7          "node_modules",
8          "client/bower_components",
9          "client_gabarito"
10     ]
11 }
```

```
1  {
2      "rules": {
3          "class-name": true,
4          "comment-format": [
5              true,
6              "check-space"
7          ],
8          "indent": [
9              true,
10             "spaces"
11         ],
12         "no-duplicate-variable": true,
13         "no-eval": true,
14         "no-internal-module": true,
15         "no-trailing-whitespace": true,
16         "no-var-keyword": true,
17         "one-line": [
18             true,
19             "check-open-brace",
20             "check-whitespace"
21         ],
22     }
23 }
```

Migrando nossa aplicação para TS

O Módulo Principal em TS

app.module.ts

```
1  namespace cadpat {  
2      'use strict';  
3      angular.module('cadpat', [  
4          'ngRoute',  
5          'bemControllers'  
6      ]);  
7  }
```

app.module.ts client_exercicios/app_ts

```
1  namespace cadpat {  
2      'use strict';  
3  
4      angular.module('cadpat', [  
5          'ngRoute',  
6          'bemControllers'  
7      ]);  
8  }
```

```
1 var cadpat;
2 (function (cadpat) {
3     'use strict';
4     angular.module('cadpat', [
5         'ngRoute',
6         'bemControllers'
7     ]);
8 })(cadpat || (cadpat = {}));
```

```
var i = 10;  
for (var i = 0; i < 5; i++) {  
    console.log(i);  
}  
console.log(i);
```

```
var i = 10;  
for (var i = 0; i < 5; i++) {  
    console.log(i);  
}  
console.log(i);
```

```
let i = 10;  
for (let i = 0; i < 5; i++) {  
    console.log(i);  
}  
console.log(i);
```

```
var i = 10;  
for (var i_1 = 0; i_1 < 5; i_1++) {  
    console.log(i_1);  
}  
console.log(i);
```

As Configurações de Rota em TS

› app.config.ts client_gabarito/app_ts

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .config(config);
6
7      config.$inject = ['$routeProvider', '$locationProvider'];
8      function config($routeProvider: ng.route.IRouteProvider,
9                      $locationProvider: ng.ILocationProvider) {
10         $locationProvider.html5Mode(true);
11
12         $routeProvider
13             .when('/bens', {
14                 templateUrl: 'app_ts/bem/bem-lista.html',
15                 controller: 'ListagemController',
16                 controllerAs: 'vm'
17             })
18             .when('/bens/:id', {
19                 templateUrl: 'app_ts/bem/bem-detalhe.html',
20                 controller: 'DetalheController',
21                 controllerAs: 'vm'
22             })
23     }
24 }
```

```
23         .when('/bens/incluir', {
24             templateUrl: 'app_ts/bem/bem-mantem.html',
25             controller: 'IncluirController',
26             controllerAs: 'vm'
27         })
28         .when('/bens/alterar/:id', {
29             templateUrl: 'app_ts/bem/bem-mantem.html',
30             controller: 'AlterarController',
31             controllerAs: 'vm'
32         })
33         .otherwise({
34             redirectTo: '/bens'
35         });
36     }
37 }
```

Um Controller Foo em TS

```
1  namespace myapp.foo {
2      'use strict';
3
4      export interface IFoo {
5          bar: string;
6      }
7
8      export class FooController {
9          foos: IFoo[];
10         static $inject: Array<string> = ['$http'];
11         constructor(private $http: ng.IHttpService) {
12             this.$http.get('/api/v1/foos')
13                 .success((foos: IFoo[]) => {
14                     this.foos = foos;
15                 });
16         }
17     }
18 }
19
20 angular
21     .module('foo.controllers')
22     .controller('FooController', FooController);
23 }
```

```
1 var myapp;
2 (function (myapp) {
3     var foo;
4     (function (foo) {
5         'use strict';
6         var FooController = (function () {
7             function FooController($http) {
8                 var _this = this;
9                 this.$http = $http;
10                this.$http.get('/api/v1/foos')
11                    .success(function (foos) {
12                        _this.foos = foos;
13                    });
14            }
15            FooController.$inject = ['$http'];
16            return FooController;
17        }());
18        foo.FooController = FooController;
19        angular
20            .module('foo.controllers')
21            .controller('FooController', FooController);
22        })(foo = myapp.foo || (myapp.foo = {}));
23 })(myapp || (myapp = {}));
```

Nosso Controller em TS

bem.controllers.ts

```
1  namespace cadpat.bem {
2      'use strict';
3
4      interface IBem {
5          _id: string;
6          urlFoto: string;
7          descricao: string;
8      }
9
10     interface IRouteParamsServiceBem extends ng.route.IRouteParamsService {
11         id: string;
12     }
```

bem.controllers.ts

```
88     class ListagemController {
89         static $inject = ['$http', '$window'];
90         bens: IBem[];
91
92         constructor(private $http: ng.IHttpService,
93             private $window: ng.IWindowService) {
94             this.listar();
95         }
96
97         ///////////////
98
99         listar() {
100             this.$http.get('/api/v1/bens')
101                 .success((response: IBem[]) => {
102                     this.bens = response;
103                 })
104                 .error((message) => {
105                     this.$window.alert(message);
106                 });
107         }
108
109         excluir(id: string) {
110             if (!this.$window.confirm('Confirma a exclusão do bem id: ' + id + '?')) {
111                 return;
112             }
113             this.$http.delete('/api/v1/bens/' + id)
114                 .success((response) => {
115                     this.$window.alert('Bem excluído com sucesso!');
116                     this.listar();
117                 })
118                 .error((message) => {
119                     this.$window.alert(message);
120                 });
121         }
122     }
123 }
```

bem.controllers.ts

```
57
58     class DetalheController {
59         static $inject = ['$http', '$routeParams', '$window'];
60         bem: IBem;
61
62         ///////////////
63
64         constructor($http: ng.IHttpService,
65             $routeParams: IRouteParamsServiceBem,
66             $window: ng.IWindowService) {
67
68             $http.get('/api/v1/bens/' + $routeParams.id)
69                 .success((response: IBem) => {
70                     this.bem = response;
71                 })
72                 .error((message) => {
73                     $window.alert(message);
74                 });
75         }
76     }
77
78 --
```

bem.controllers.ts

```
45  class IncluirController {
46      static $inject = ['$http', '$location', '$window'];
47      bem: IBem;
48
49      constructor(private $http: ng.IHttpService,
50                  private $location: ng.ILocationService,
51                  private $window: ng.IWindowService) {
52  }
53
54  ///////////////
55
56  salvar() {
57      this.$http.post('/api/v1/bens', this.bem)
58          .success((response) => {
59              this.$window.alert('Bem incluído com sucesso');
60              this.$location.path('/bens');
61          })
62          .error((message) => {
63              this.$window.alert(message);
64          });
65      }
66  }
```

bem.controllers.ts

```
14  class AlterarController {
15      static $inject = ['$http', '$location', '$routeParams', '$window'];
16      bem: IBem;
17
18      constructor(private $http: ng.IHttpService,
19                  private $location: ng.ILocationService,
20                  private $routeParams: IRouteParamsServiceBem,
21                  private $window: ng.IWindowService) {
22          $http.get('/api/v1/bens/' + $routeParams.id)
23              .success((response: IBem) => {
24                  this.bem = response;
25              })
26              .error((message) => {
27                  this.$window.alert(message);
28              });
29      }
30
31      /////////////////
32
33      salvar() {
34          this.$http.put('/api/v1/bens/' + this.bem._id, this.bem)
35              .success((response) => {
36                  this.$window.alert('Bem alterado com sucesso');
37                  this.$location.path('/bens');
38              })
39              .error((message) => {
40                  this.$window.alert(message);
41              });
42      }
}
```

bem.controllers.ts

```
124     angular
125         .module('bemControllers', [])
126             .controller('ListagemController', ListagemController)
127             .controller('DetalheController', DetalheController)
128             .controller('IncluirController', IncluirController)
129             .controller('AlterarController', AlterarController);
130
131 }
```

Parte V

Diretivas

AngularJS Directives

Application

- `ng-app`
- `ng-controller`

Forms

- `ng-pattern`
- `ng-minlength`
- `ng-maxlength`
- `ng-required`
- `ng-list`
- `ng-true-value`
- `ng-false-value`
- `ng-options`
- `ng-submit`

Template

- `ng-csp`
- `ng-disabled`
- `ng-hide | show`
- `ng-if`
- `ng-mouse`
- `ng-repeat`
- `ng-switch`
- `ng-transclude`
- `ng-view`
- `ng-include`

Operation

- `ng-change`
- `ng-checked`
- `ng-click`
- `ng-href`
- `ng-selected`

Binding

- `ng-bind`
- `ng-model`
- `ng-init`
- `ng-src`
- `ng-style`

```
<my-dir></my-dir>
<span my-dir="exp"></span>
<!-- directive: my-dir exp -->
<span class="my-dir: exp;"></span>
```

Convertendo nosso cabeçalho em uma
Diretiva para promover a reutilização
do HTML

```
1  <!--<div class="page-header">
2      <h1>Listagem de Bens</h1>
3  </div>-->
4 | <ac-cabecalho></ac-cabecalho>
5 | <div class="row">
6     <!-- Barra Lateral -->
7     <div class="col-md-2">
8         Busca: <input ng-model="criterio">
9         <a href="/bens/incluir" class="btn btn-primary" role="button">Novo Bem</a>
10    </div>
```

bem-detalhe.html client/app_ts/bem

```
1 | <!--<div class="page-header">
2 |     <h1>Detalhamento de Bem: {{vm.bem._id}}</h1>
3 | </div>-->
4 | <ac-cabecalho></ac-cabecalho>
5 | <div class="row">
6 |     <!-- Conteúdo -->
7 |     <div class="col-md-12">
8 |         <div class="row">
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('accCabecalho', accCabecalho);
6
7      accCabecalho.$inject = [];
8      function accCabecalho() {
9          let directive: ng.IDirective = {
10              template: `<div class="page-header">
11                  <h1>{{vm.textoCabecalho}}</h1>
12                  </div>`
13          };
14
15          return directive;
16      }
17 }
```

Criando as variáveis de
'textoCabecalho' nos controllers

```
68     class DetalheController {
69         static $inject = ['$http', '$routeParams', '$window'];
70         bem: IBem;
71         textoCabecalho: string; ←
72
73         ///////////////
74
75         constructor($http: ng.IHttpService,
76                     $routeParams: IRouteParamsServiceBem,
77                     $window: ng.IWindowService) {
78
79             $http.get('/api/v1/bens/' + $routeParams.id)
80                 .success((response: IBem) => {
81                     this.bem = response;
82                     this.textoCabecalho = `Detalhamento de Bem: ${this.bem._id}`; ←
83                 })
84                 .error((message) => {
85                     $window.alert(message);
86                 });
87         }
88     }
89
90     class ListagemController {
91         static $inject = ['$http', '$window'];
92         bens: IBem[];
93         textoCabecalho: string; ←
94
95         constructor(private $http: ng.IHttpService,
96                     private $window: ng.IWindowService) {
97             this.listar();
98             this.textoCabecalho = 'Listagem de Bens'; ←
99         }

```

Movendo o HTML para um arquivo
específico

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acCabecalho', acCabecalho);
6
7      acCabecalho.$inject = [];
8      function acCabecalho() {
9          let directive: ng.IDirective = {
10              templateUrl: 'app_ts/directives/ac-cabecalho.directive.html'
11          };
12
13          return directive;
14      }
15  }
```

- ac-cabecalho.directive.html client/app_ts/directives

```
1 <div class="page-header">
2     <h1>{{vm.textoCabecalho}}</h1>
3 </div>
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acCabecalho', acCabecalho);
6
7      acCabecalho.$inject = [];
8      function acCabecalho() {
9          let directive: ng.IDirective = {
10              templateUrl: 'app_ts/directives/ac-cabecalho.directive.html',
11              restrict: 'E' ←
12          };
13
14          return directive;
15      }
16  }
```

Resolvendo o problema do
acoplamento de código

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acCabecalho', acCabecalho);
6
7      acCabecalho.$inject = [];
8      function acCabecalho() {
9          let directive: ng.IDirective = {
10              templateUrl: 'app_ts/directives/ac-cabecalho.directive.html',
11              scope: {
12                  texto: '@' ←
13              },
14              restrict: 'E'
15          };
16
17          return directive;
18      }
19  }
```

```
ac-cabecalho.directive.html client/app_ts/directives
```

```
1 <div class="page-header">  
2     <h1>{{texto}}</h1>  
3 </div>  
4 |
```

```
bem-lista.html client/app_ts/bem
```

```
1 <!--<div class="page-header">  
2     <h1>Listagem de Bens</h1>  
3 </div>-->  
4 | <ac-cabecalho texto="Listagem de Bens"></ac-cabecalho>  
5 <div class="row">  
6     <!-- Barra Lateral -->  
7     <div class="col-md-2">
```

```
bem-detalhe.html client/app_ts/bem
```

```
1 | <!--<div class="page-header">  
2 |     <h1>Detalhamento de Bem: {{vm.bem._id}}</h1>  
3 | </div>-->  
4 | <ac-cabecalho texto="Detalhamento de Bem: {{vm.bem._id}}"></ac-cabecalho>  
5 | <div class="row">  
6 |     <!-- Conteúdo -->  
7 |     <div class="col-md-12">  
8 |         <div class="row">
```

Utilizando a transclusão para o
conteúdo do cabeçalho

```
1 <ac-cabecalho texto="Listagem de Bens">
2   <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
3 </ac-cabecalho>
4 <div class="row">
5   <!-- Barra Lateral -->
6   <div class="col-md-2">
7     Busca: <input ng-model="criterio">
8     <a href="/bens/incluir" class="btn btn-primary" role="button">Novo Bem</a>
9   </div>
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acCabecalho', acCabecalho);
6
7      acCabecalho.$inject = [];
8      function acCabecalho() {
9          let directive: ng.IDirective = {
10              templateUrl: 'app_ts/directives/ac-cabecalho.directive.html',
11              scope: {
12                  texto: '@'
13              },
14              transclude: true, ←
15              restrict: 'E'
16          };
17
18          return directive;
19      }
20 }
```

```
1 <div class="page-header">  
2     <h1>{{texto}}</h1>  
3     <div ng-transclude></div>  
4 </div>
```

Transclusão múltipla no AngularJS 1.5

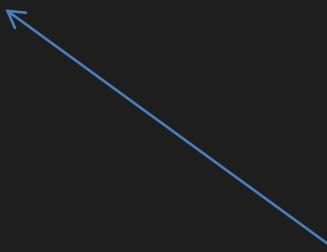
```
angular.module('multiSlotTranscludeExample', [])
.directive('pane', function(){
  return {
    restrict: 'E',
    transclude: {
      'title': '?pane-title',
      'body': 'pane-body',
      'footer': '?pane-footer'
    },
    template: '<div style="border: 1px solid black;">' +
      '<div class="title" ng-transclude="title">Fallback Title</div>' +
      '<div ng-transclude="body"></div>' +
      '<div class="footer" ng-transclude="footer">Fallback Footer</div>' +
      '</div>'
  };
})
```

```
1 | <ac-cabecalho ng-show="vm.bem._id" texto="Alterando o Bem: {{vm.bem._id}}"></ac-cabecalho>
2 | <ac-cabecalho ng-show="!vm.bem._id" texto="Cadastro de Novo Bem"></ac-cabecalho>
3 |
4 | <form novalidate name="frmbem" ng-submit="vm.salvar()">
5 |     <div class="form-group">
6 |         <label for="urlFoto">URL Foto</label>
7 |         <input type="text" name="urlFoto" ng-model="vm.bem.urlFoto" required
8 |             class="form-control" id="urlFoto" placeholder="URL Foto">
9 |         <span ng-show="frmbem.urlFoto.$dirty && frmbem.urlFoto.$error.required"
10 |             class="form-control alert-danger">
11 |             URL da foto não informada
12 |         </span>
```

DIA 8

Criando uma diretiva que aciona
métodos do controller

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acBtAtencao', acBtAtencao);
6
7      acBtAtencao.$inject = [];
8      function acBtAtencao() {
9          let directive: ng.IDirective = {
10              template: `<button ng-click="acao()"`  
11                  class="btn btn-danger" role="button">{{texto}}</button>`,
12              scope: {
13                  texto: '@',
14                  acao: '&'  
15              },
16              restrict: 'E'  
17          };
18
19          return directive;  
20      }
21  }
```



```
25
26      <ac-bt-atencao acao="vm.excluir(bem._id)" texto="Excluir">
27      </ac-bt-atencao>
28
29      <!--<button ng-click="vm.excluir(bem._id)"
30                  class="btn btn-default" role="button">Excluir</button>-->
31      </div>
32  </div>
33  </div>
34  </div>
35 </div>
```

Criando um botão de navegação

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acBtNavegar', acBtNavegar);
6
7      acBtNavegar.$inject = [];
8      function acBtNavegar() {
9          let directive: ng.IDirective = {
10              template: `<a ng-href="{{destino}}" 
11                                class="btn btn-primary" role="button">{{texto}}</a>`,
12              scope: {
13                  texto: '@',
14                  destino: '@'
15              },
16              restrict: 'E'
17          };
18
19          return directive;
20      }
21  }
```

```
1  <ac-cabecalho texto="Listagem de Bens">
2      <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
3  </ac-cabecalho>
4  <div class="row">
5      <!-- Barra Lateral -->
6      <div class="col-md-2">
7          Busca: <input ng-model="criterio">
8          <!--<a href="/bens/incluir" class="btn btn-primary" role="button">Novo Bem</a>-->
9          <ac-bt-navegar destino="/bens/incluir" texto="Novo Bem">
10         </ac-bt-navegar>           ↑
11     </div>
12
13     <!-- Conteúdo -->
14     <div class="col-md-10">
15         <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
16             <div class="col-md-3">
17                 <div class="thumbnail">
18                     <a href="/bens/{{bem.id}}">
19                         
20                         <div class="caption">
21                             <h3>{{bem.descricao}}</h3>
22                         </div>
23                     </a>
24
25                     <!--<a ng-href="{{'/bens/alterar/' + bem._id}}" 
26                         class="btn btn-primary" role="button">Alterar</a>-->
27
28                     <ac-bt-navegar destino="{{'/bens/alterar/' + bem._id}}" texto="Alterar">
29                     </ac-bt-navegar>           ↑
30
31                     <ac-bt-atencao acao="vm.excluir(bem._id)" texto="Excluir">
32                     </ac-bt-atencao>
33
34     </div>
```

Componentizando a aplicação

Comparison between Directive definition and Component definition

	Directive	Component
bindings	No	Yes (binds to controller)
bindToController	Yes (default: false)	No (use bindings instead)
compile function	Yes	No
controller	Yes	Yes (default <code>function() {}</code>)
controllerAs	Yes (default: false)	Yes (default: <code>\$ctrl</code>)
link functions	Yes	No
multiElement	Yes	No
priority	Yes	No
require	Yes	Yes
restrict	Yes	No (restricted to elements only)
scope	Yes (default: false)	No (scope is always isolate)
template	Yes	Yes, injectable
templateNamespace	Yes	No
templateUrl	Yes	Yes, injectable
terminal	Yes	No
transclude	Yes (default: false)	Yes (default: false)

Um componente para a barra lateral

```
1  <ac-cabecalho texto="Listagem de Bens">
2      <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
3  </ac-cabecalho>
4  <div class="row">
5      <!-- Barra Lateral -->
6      <barra-lateral></barra-lateral> ←
7      <!--<div class="col-md-2">
8          Busca: <input ng-model="criterio">
9          <ac-bt-navegar destino="/bens/incluir" texto="Novo Bem">
10         </ac-bt-navegar>
11     </div>-->
12
13     <!-- Conteúdo -->
14     <div class="col-md-10">
15         <div ng-repeat="bem in vm.bens | filter:criterio" class="row">
16             <div class="col-md-3">
17                 <div class="thumbnail">
18                     <a href="/bens/{{bem._id}}">
19                         
20                         <div class="caption">
21                             <h3>{{bem.descricao}}</h3>
22                         </div>
23                     </a>
24
25                     <ac-bt-navegar destino="{{'/bens/alterar/' + bem._id}}" texto="Alterar">
26                     </ac-bt-navegar>
27
28                     <ac-bt-atencao acao="vm.excluir(bem._id)" texto="Excluir">
29                     </ac-bt-atencao>
30                 </div>
31             </div>
32         </div>
33     </div>
```

barra-lateral.component.ts client/app_ts/components

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .component('barraLateral', {
6              templateUrl: 'app_ts/components/barra-lateral.component.html'
7          });
8  }
9
```

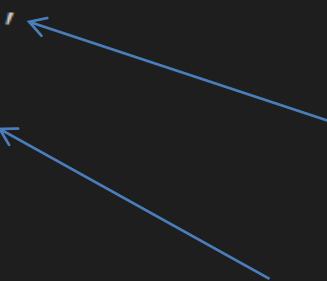
barra-lateral.component.html client/app_ts/components

```
1  <div class="col-md-2">
2      Busca: <input ng-model="criterio">
3      <ac-bt-navegar destino="/bens/incluir" texto="Novo Bem">
4      </ac-bt-navegar>
5  </div>
```

```
1  <ac-cabecalho texto="Listagem de Bens">
2      <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
3  </ac-cabecalho>
4  <div class="row">
5      <!-- Barra Lateral -->
6      <barra-lateral criterio="vm.criterio"></barra-lateral>
7      <!--<div class="col-md-2">
8          Busca: <input ng-model="criterio">
9          <ac-bt-navegar destino="/bens/incluir" texto="Novo Bem">
10         </ac-bt-navegar>
11     </div>-->
12
13      <!-- Conteúdo -->
14      <div class="col-md-10">
15          <div ng-repeat="bem in vm.bens | filter:vm.criterio" class="row">
16              <div class="col-md-3">
17                  <div class="thumbnail">
18                      <a href="/bens/{{bem.id}}">
19                          
20                          <div class="caption">
21                              <h3>{{bem.descricao}}</h3>
22                          </div>
23                      </a>
24
25                      <ac-bt-navegar destino="{{'/bens/alterar/' + bem._id}}" texto="Alterar">
26                      </ac-bt-navegar>
27
28                      <ac-bt-atencao acao="vm.excluir(bem._id)" texto="Excluir">
29                      </ac-bt-atencao>
30                  </div>
31              </div>
32          </div>
33      </div>
```

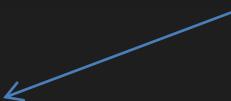
```
barra-lateral.component.ts client/app_ts/components
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .component('barraLateral', {
6              templateUrl: 'app_ts/components/barra-lateral.component.html',
7              controllerAs: 'vm',
8              bindings: {
9                  criterio: '='
10             }
11         });
12     }
```



```
barra-lateral.component.html client/app_ts/components
```

```
1  <div class="col-md-2">
2      Busca: <input ng-model="vm.criterio">
3      <ac-bt-navegar destino="/bens/incluir" texto="Novo Bem">
4      </ac-bt-navegar>
5  </div>
```



Um componente para a lista de bens

```
<ac-cabecalho texto="Listagem de Bens">
    <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
</ac-cabecalho>
<div class="row">
    <!-- Barra Lateral -->
    <barra-lateral criterio="vm.criterio"></barra-lateral>

    <!-- Conteúdo -->
    <lista-bens bens="vm.bens" criterio="vm.criterio" on-excluir="vm.excluir(bemId)">
    </lista-bens>
    <!--<div class="col-md-10">
        <div ng-repeat="bem in vm.bens | filter:vm.criterio" class="row">
            <div class="col-md-3">
                <div class="thumbnail">
                    <a href="/bens/{{bem._id}}">
                        
                        <div class="caption">
                            <h3>{{bem.descricao}}</h3>
                        </div>
                    </a>

                    <ac-bt-navegar destino="{{'/bens/alterar/' + bem._id}}" texto="Alterar">
                    </ac-bt-navegar>

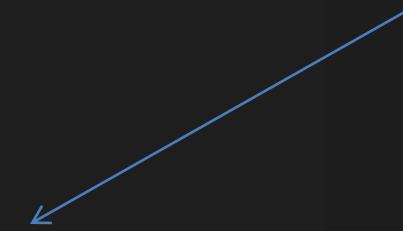
                    <ac-bt-atencao acao="vm.excluir(bem._id)" texto="Excluir">
                    </ac-bt-atencao>
                </div>
            </div>
        </div>
    </div>
</div>
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .component('listaBens', {
6              templateUrl: 'app_ts/components/lista-bens.component.html',
7              controllerAs: 'vm',
8              bindings: {
9                  bens: '=',
10                 criterio: '=',
11                 onExcluir: '&'
12             }
13         });
14 }
```

```
1 <div class="col-md-10">
2     <div ng-repeat="bem in vm.bens | filter:vm.criterio" class="row">
3         <div class="col-md-3">
4             <div class="thumbnail">
5                 <a href="/bens/{{bem.id}}">
6                     
7                     <div class="caption">
8                         <h3>{{bem.descricao}}</h3>
9                     </div>
10                </a>
11
12                <ac-bt-navegar
13                    destino="{{'/bens/alterar/' + bem._id}}"
14                    texto="Alterar">
15                </ac-bt-navegar>
16
17                <ac-bt-atencao
18                    acao="vm.onExcluir({ bemId: bem._id })"
19                    texto="Excluir">
20                </ac-bt-atencao>
21            </div>
22        </div>
23    </div>
24 </div>
```

Um componente toda a tela de
listagem de bens

```
1  namespace cadpat {
2    'use strict';
3
4    angular.module('cadpat')
5      .config(config);
6
7    config.$inject = ['$routeProvider', '$locationProvider'];
8    function config($routeProvider: ng.route.IRouteProvider,
9                  $locationProvider: ng.ILocationProvider) {
10      $locationProvider.html5Mode(true);
11
12      $routeProvider
13        .when('/bens', {
14          templateUrl: 'app_ts/bem/bem-lista.html'
15          // controller: 'ListagemController',
16          // controllerAs: 'vm'
17        })
18        .when('/bens/incluir', {
19          templateUrl: 'app_ts/bem/bem-mantem.html',
20          controller: 'IncluirController',
21          controllerAs: 'vm'
22        })
23        .when('/bens/alterar/:id', {
24          templateUrl: 'app_ts/bem/bem-mantem.html',
25          controller: 'AlterarController',
26          controllerAs: 'vm'
27        })
28        .when('/bens/:id', {
29          templateUrl: 'app_ts/bem/bem-detalhe.html',
```



```
  "controller": "IncluirController",
  "controllerAs": "vm"
```

```
1 | <home-bens></home-bens>
2 | <!--<ac-cabecalho texto="Listagem de Bens">
3 |     <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
4 | </ac-cabecalho>
5 | <div class="row">-->
6 |     <!-- Barra Lateral -->
7 |     <!--<barra-lateral criterio="vm.criterio"></barra-lateral>-->
8 |
9 |     <!-- Conteúdo -->
10 |    <!--<lista-bens bens="vm.bens" criterio="vm.criterio" on-excluir="vm.excluir()">
11 |        </lista-bens>
12 |    </div>-->
13 |
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .component('homeBens', {
6              templateUrl: 'app_ts/components/home-bens.component.html',
7              controller: cadpat.bem.ListagemController,
8              controllerAs: 'vm',
9          });
10 }
```

```
1 <ac-cabecalho texto="Listagem de Bens">
2     <h3>Lista dos bens cadastrados de: {{vm.nomePessoa}}</h3>
3 </ac-cabecalho>
4 <div class="row">
5     <!-- Barra Lateral -->
6     <barra-lateral criterio="vm.criterio"></barra-lateral>
7
8     <!-- Conteúdo -->
9     <lista-bens bens="vm.bens"
10        criterio="vm.criterio"
11        on-excluir="vm.excluir(bemId)">
12     </lista-bens>
13 </div>
```

```
1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .config(config);
6
7      config.$inject = ['$routeProvider', '$locationProvider'];
8      function config($routeProvider: ng.route.IRouteProvider,
9                      $locationProvider: ng.ILocationProvider) {
10         $locationProvider.html5Mode(true);
11
12         $routeProvider
13             .when('/bens', {           ←
14                 template: '<home-bens></home-bens>'           |
15             })
16             .when('/bens/incluir', {
17                 templateUrl: 'app_ts/bem/bem-mantem.html',
18                 controller: 'IncluirController',
19                 controllerAs: 'vm'
20             })
21             .when('/bens/alterar/:id', {
22                 templateUrl: 'app_ts/bem/bem-mantem.html',
23                 controller: 'AlterarController',
24                 controllerAs: 'vm'
25             })
26     }
27 }
```

Criando um filtro customizado

```
24  <a href="/bens/{{bem._id}}">
25      
26      <div class="caption">
27          <h3>{{bem.descricao | maiusculo}}</h3>
28          <h4>Tipo: {{bem.tipo}}</h4> ←
29      </div>
30  </a>
```

```
1  namespace cadpat {
2      'use strict';
3
4      maiusculo.$inject = [];
5      function maiusculo() {
6          return (input: string) => {
7              return input.toUpperCase();
8          };
9      }
10
11     angular
12         .module('cadpatFilters', [])
13         .filter('maiusculo', maiusculo);
14 }
```

Criando um serviço customizado

```
1  namespace cadpat {
2      'use strict';
3
4      interface IBemResource extends ng.resource.IResource<cadpat.bem.IBem> {
5      }
6
7      export interface IBemResourceClass extends
8          ng.resource.IResourceClass<IBemResource> {
9
10         update(params: Object,
11             IBem: cadpat.bem.IBem,
12             success: Function,
13             error?: Function): cadpat.bem.IBem;
14     }
15
16     BemResource.$inject = ['$resource'];
17     function BemResource ($resource: ng.resource.IResourceService):
18         IBemResourceClass {
19         return <IBemResourceClass> $resource('/api/v1/bens/:id', null, {
20             update: {
21                 method: 'PUT'
22             }
23         });
24     }
25
26     angular
27         .module('cadpatServices', ['ngResource'])
28         .factory('BemResource', BemResource);
29 }
```

```
96     export class ListagemController {
97         static $inject: Array<string> = ['BemResource', '$window'];
98         bens: IBem[];
99         nomePessoa: string;
100
101        constructor(private BemResource: cadpat.IBemResourceClass,
102                    private $window: ng.IWindowService) {
103            this.nomePessoa = 'Chico Buarque';
104            this.listar();
105        }
106
107        ///////////////////
108
109        listar() {
110            this.BemResource.query(
111                (bens: IBem[]) => {
112                    this.bens = bens;
113                },
114                (error) => {
115                    this.$window.alert(error);
116                }
117            );
118        }
}
```

```
120     excluir(id: string) {
121         if (!this.$window.confirm(`Confirma a exclusão do bem id: ${id}?`)) {
122             return;
123         }
124         this.BemResource.delete({
125             id: id
126         },
127         () => {
128             this.$window.alert('Bem excluído com sucesso!');
129             this.listar();
130         },
131         (error) => {
132             this.$window.alert(error);
133         }
134     );
135 }
136 }
```

```
72  export class DetalheController {
73    static $inject: Array<string> = ['BemResource', '$routeParams', '$window'];
74    bem: IBem;
75
76    ///////////////////
77
78    constructor(private BemResource: cadpat.IBemResourceClass,
79                private $routeParams: IRouteParamsServiceBem,
80                private $window: ng.IWindowService) {
81
82      BemResource.get(
83        {
84          id: $routeParams.id,
85        },
86        (bem: IBem) => {
87          this.bem = bem;
88        },
89        (error) => {
90          this.$window.alert(error);
91        }
92      );
93    }
94 }
```

```
14     export class AlterarController {
15         static $inject: Array<string> =
16             ['$BemResource', '$location', '$routeParams', '$window'];
17         bem: IBem;
18
19         constructor(private BemResource: cadpat.IBemResourceClass,
20                     private $location: ng.ILocationService,
21                     private $routeParams: IRouteParamsServiceBem,
22                     private $window: ng.IWindowService) {
23
24             this.BemResource.get({
25                 id: this.$routeParams.id,
26             }, (bem: IBem) => {
27                 this.bem = bem;
28             }, (error: string) => {
29                 this.$window.alert(error);
30             });
31         }
32
33         ///////////////
34
35         salvar() {
36             this.BemResource.update({
37                 id: this.$routeParams.id,
38             }, this.bem, () => {
39                 this.$window.alert('Bem alterado com sucesso');
40                 this.$location.path('/bens');
41             }, (error) => {
42                 this.$window.alert(error);
43             });
44         }
}
```

```
47     export class IncluirController {
48         static $inject: Array<string> = ['BemResource', '$location', '$window'];
49         bem: IBem;
50
51         constructor(private BemResource: cadpat.IBemResourceClass,
52                     private $location: ng.ILocationService,
53                     private $window: ng.IWindowService) {
54     }
55
56     ///////////////////
57
58     salvar() {
59         this.BemResource.save(
60             this.bem,
61             () => {
62                 this.$window.alert('Bem incluído com sucesso');
63                 this.$location.path('/bens');
64             },
65             (error) => {
66                 this.$window.alert(error);
67             }
68         );
69     }
70 }
```

DIA 9

Parte VI

UI Bootstrap – AngularUI



AngularUI

The companion suite(s) to the [AngularJS](#) framework.

UI Bootstrap

Bootstrap components written in pure AngularJS by the
AngularUI Team

```
1 <!DOCTYPE html>
2 <html lang="pt-br" ng-app="cadpat">
3
4 <head>
5   <meta charset="utf-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1">
8   <title>Cadastro de Patrimônio</title>
9   <base href="/">
10
11  <!-- jQuery (necessary for Bootstrap's JavaScript plugins) -->
12  <script src="bower_components/jquery/dist/jquery.min.js"></script>
13
14  <!-- Bootstrap -->
15  <link href="bower_components/bootstrap/dist/css/bootstrap.min.css" rel="stylesheet">
16  <script src="bower_components/bootstrap/dist/js/bootstrap.min.js"></script>
17
18  <!-- angular.js -->
19  <script src="bower_components/angular/angular.js"></script>
20  <script src="bower_components/angular-route/angular-route.js"></script>
21
22  <!-- angular ui-bootstrap -->
23  <link href="bower_components/angular-bootstrap/ui-bootstrap-csp.css" rel="stylesheet">
24  <script src="bower_components/angular-bootstrap/ui-bootstrap.js"></script>
25  <script src="bower_components/angular-bootstrap/ui-bootstrap-tpls.js"></script>
```

```
1  namespace cadpat {  
2      'use strict';  
3      angular.module('cadpat', [  
4          'ngRoute',  
5          'ui.bootstrap', ←  
6          'cadpatFilters',  
7          'cadpatServices',|  
8          'bemControllers'  
9      ]);  
10 }
```

Accordion (ui.bootstrap.accordion)

[Toggle last panel](#)

[Enable / Disable first panel](#)

Open only one at a time

Static Header, initially expanded

This content is straight in the template.

Dynamic Group Header - 1

Dynamic Group Header - 2

Dynamic Group Body - 2

Dynamic Body Content

Custom template

Custom template with custom header template



Delete account

Log In / Logout / Log Out



```
1  <div class="col-md-10">
2    <uib-accordion>
3      <uib-accordion-group heading="Bem ID: {{bem._id}}"
4        ng-repeat="bem in vm.bens | filter:vm.criterio">
5        <div class="col-md-12">
6          <a href="/bens/{{bem.id}}">
7            
8            <div class="caption">
9              <h3>{{bem.descricao}}</h3>
10             </div>
11           </a>
12
13           <ac-bt-navegar destino="{{'/bens/alterar/' + bem._id}}"
14             texto="Alterar">
15           </ac-bt-navegar>
16
17           <ac-bt-atencao acao="vm.onExcluir({ bemId: bem._id })"
18             texto="Excluir">
19           </ac-bt-atencao>
20         </div>
21       </uib-accordion-group>
22     </uib-accordion>
23   </div>
```

Alert (ui.bootstrap.alert)

Oh snap! Change a few things up and try submitting again.



Well done! You successfully read this important alert message.



A happy alert!

Add Alert

```
41      </head>
42
43  <body>
44      <div class="container">
45          <div ng-controller="AlertaController as vm">
46              <uib-alert ng-repeat="alerta in vm.alertas"
47                  type="{{alerta.tipo}}"
48                  close="vm.fecharAlerta($index)">
49                  {{alerta.msg}}
50              </uib-alert>
51          </div>
52          <div ng-view></div>
53      </div>
54  </body>
55
56  </html>
```

```
1  namespace cadpat.alerta {
2      'use strict';
3
4 |      type TipoAlerta = 'danger' | 'success';
5
6 |      export interface IAlerta {
7 |          tipo: TipoAlerta;
8 |          msg: string;
9 |      }
10
11     export class AlertaService {
12         alertas: IAlerta[] = [];
13
14         add(tipo: TipoAlerta, msg: string) {
15             this.alertas.push({
16                 tipo: tipo,
17                 msg: msg
18             });
19         }
20     }
21
22     angular
23         .module('alertaServices', [])
24         .service('alertaService', AlertaService);
25 }
```

```
1  namespace cadpat.alerta {
2      'use strict';
3
4      class AlertaController {
5          static $inject = ['alertaService'];
6          alertas: cadpat.alerta.IAlerta[];
7
8          constructor(private alertaService: cadpat.alerta.AlertService) {
9              this.alertas = alertaService.alertas;
10         }
11
12         ///////////////////
13
14         fecharAlerta(index) {
15             this.alertas.splice(index, 1);
16         }
17     }
18
19     angular
20         .module('alertaControllers', ['alertaServices'])
21         .controller('AlertaController', AlertaController);
22 }
```

```
10  export class ListagemController {  
11      static $inject: Array<string> = ['BemResource', '$window', 'alertaService'];  
12      bens: IBem[];  
13      nomePessoa: string;  
14  
15      constructor(private BemResource: cadpat.IBemResourceClass,  
16                      private $window: ng.IWindowService,  
17                      private alertaService: cadpat.alerta.AlertService) {  
18          this.nomePessoa = 'Chico Buarque';  
19          this.listar();  
20      }  
21  
22      ///////////////////  
23  
24      listar() {  
25          this.BemResource.query(  
26              (bens: IBem[]) => {  
27                  this.bens = bens;  
28              },  
29              (error: string) => {  
30                  this.alertaService.add('danger', error);  
31              }  
32          );  
33      }  
34  }
```

```
35     excluir(id: string) {
36         if (!this.$window.confirm(`Confirma a exclusão do bem id: ${id}?`)) {
37             return;
38         }
39         this.BemResource.delete(
40             {
41                 id: id
42             },
43             () => {
44                 this.alertaService.add('success', 'Bem excluído com sucesso');
45                 this.listar();
46             },
47             (error: string) => {
48                 this.alertaService.add('danger', error);
49             }
50         );
51     }
52 }
```

Buttons (ui.bootstrap.buttons)

Single toggle

```
0
```

Single Toggle

Checkbox

```
Model: {"left":false,"middle":false,"right":false}
```

```
Results: []
```

Left Middle Right

Radio & Uncheckable Radio

```
Right
```

Left Middle Right

Left Middle Right

Toggle uncheckable

```
15      <label for="descricao" class="control-label">Descrição </label>
16      <input type="text" name="descricao" ng-model="vm.bem.descricao" required m
17          class="form-control" id="descricao" placeholder="Descrição">
18      <span ng-show="frmBem.descricao.$dirty && frmBem.descricao.$error.required"
19          class="form-control alert-danger">
20          Descrição não informada
21      </span>
22      <span ng-show="frmBem.descricao.$dirty && frmBem.descricao.$error.minLength"
23          class="form-control alert-danger">
24          Descrição deve ter no mínimo de 10 caracteres
25      </span>
26      <div class="btn-group">
27          <label class="btn btn-primary" ng-model="vm.bem.tipo" <-->
28              uib-btn-radio="'movel'">Móvel</label>
29          <label class="btn btn-primary" ng-model="vm.bem.tipo" <-->
30              uib-btn-radio="'imovel'">Imóvel</label>
31      </div>
32  </div>
33  <button type="submit" class="btn btn-primary" ng-disabled="frmBem.$invalid">Salva
34  <a href="/bens" class="btn btn-default">Cancelar</a>
35 </form>
```

```
1  <div class="col-md-10">
2    <uib-accordion>
3      <uib-accordion-group heading="Bem ID: {{bem._id}}"
4        ng-repeat="bem in vm.bens | filter:vm.criterio">
5        <div class="col-md-12">
6          <a href="/bens/{{bem._id}}">
7            
8            <div class="caption">
9              <h3>{{bem.descricao}}</h3>
10             <h4>Tipo: {{bem.tipo}}</h4> ←
11           </div>
12         </a>
13
14         <ac-bt-navegar destino="{{ '/bens/alterar/' + bem._id }}"
15                       texto="Alterar">
16           </ac-bt-navegar>
17
18         <ac-bt-atencao acao="vm.onExcluir({ bemId: bem._id })"
19                       texto="Excluir">
20           </ac-bt-atencao>
21         </div>
22       </uib-accordion-group>
23     </uib-accordion>
24   </div>
```

Carousel (ui.bootstrap.carousel)



[Add Slide](#)

[Randomize slides](#)

Disable Slide Looping

Interval, in milliseconds:

5000

Enter a negative number or 0 to stop the interval.

```
1  <div class="col-md-10">
2      <div class="row">
3          <div class="col-md-6">
4              <uib-carousel active="0">
5                  <uib-slide ng-repeat="bem in vm.bens" index="$index">
6                      
8                      <div class="carousel-caption">
9                          <p>{{bem.descricao}}</p>
10                     </div>
11                 </uib-slide>
12             </uib-carousel>
13         </div>
14     </div>
```

Collapse (ui.bootstrap.collapse)

`Toggle collapse`

Some content

```
15 <div class="row">
16   <uib-accordion>
17     <uib-accordion-group heading="Bem ID: {{bem._id}}"
18       ng-repeat="bem in vm.bens | filter:vm.criterio">
19       <div class="col-md-12">
20         <a href="/bens/{{bem._id}}">
21           
22           <div class="caption">
23             <h3>{{bem.descricao}}</h3>
24             <h4>Tipo: {{bem.tipo}}</h4>
25           </div>
26         </a>
27
28         <button type="button" class="btn btn-default"
29            ng-click="exibirDetalhes = !exibirDetalhes">
30             {{exibirDetalhes? 'Menos' : 'Mais'}} Detalhes
31         </button>
32         <hr>
33         <div uib-collapse="!exibirDetalhes">
34           <div class="well well-lg">Lorem ipsum dolor sit amet, consectetur adipiscing elit.
35             Donec auctor sed metus in dignissim. In hac habitasse platea dictumst. Etiam
36             commodo lacus ligula, ut posuere mauris egestas non. Donec elementum tristique
37             lacinia. Ut semper, tortor et tristique vulputate, elit enim tristique velit,
38             quis dapibus augue odio ut elit. Vivamus semper sed tortor tempor viverra.
39             Maecenas tempor congue lectus pharetra convallis. Nullam vitae dictum justo,
40             eget accumsan erat. Praesent lacinia at elit quis hendrerit. In eu viverra sapien.</div>
41         </div>
42
43         <ac-bt-navegar destino="{{'/bens/alterar/' + bem._id}}"
44           texto="Alterar">
45         </ac-bt-navegar>
```

Testes Unitários

package.json

```
1  {
2    "version": "0.1.0",
3    "name": "cadastro-patrimonio-ng",
4    "description": "Aplicação Exemplo de Cadastro de Patrimônio em AngularJS",
5    "license": "MIT",
6    "scripts": {
7      "start": "node server/server.js",
8      "test": "karma start test/karma.conf.js" ←
9    },
10   "devDependencies" : {
11     "jasmine-core": "^2.3.4",
12     "karma": "~0.12", ←
13     "karma-jasmine": "^0.3.5",
14     "karma-chrome-launcher": "^0.1.12"
15   },
16   "dependencies": {
17     "body-parser": "^1.15.1",
18     "express": "^4.14.0",
19     "nedb": "^1.8.0"
20   }
21 }
```

```
1 module.exports = function(config) {
2     config.set({
3         basePath: '../',
4         files: [
5             'client_gabarito/bower_components/angular/angular.js',
6             'client_gabarito/bower_components/angular-mocks/angular-mocks.js',
7             'client_gabarito/app_ts/app.module.js',
8             'client_gabarito/app_ts/**/*.*js'
9         ],
10        autoWatch: true,
11        browsers: ['Chrome'],
12        frameworks: ['jasmine'],
13        plugins: [
14            'karma-chrome-launcher',
15            'karma-jasmine'
16        ]
17    });
18};
```

DIA 10

```
1  'use strict';
2
3  describe('testes de cadpatFilters', () => {
4
5      beforeEach/angular.mock.module('cadpatFilters');
6
7      describe('maiusculo', () => {
8
9          it('Deve converter corretamente para maiusculo',
10              inject((maiusculoFilter) => {
11                  expect(maiusculoFilter('foo')).toBe('FOO');
12              })
13          );
14
15          it('Deve suportar strings nulas',
16              inject((maiusculoFilter) => {
17                  expect(maiusculoFilter(null)).toBe('');
18              })
19          );
20      });
21  });
```

DEBUG

Karma v0.12.37 - connected

Chrome 51.0.2704 (Mac OS X 10.10.5) is idle

```
cadastro-patrimonio-ng — npm test — Google Chrome He — 80x24
npm          tsc          node...
tar strings nulas FAILED
    TypeError: Cannot read property 'toUpperCase' of null
        at /Users/tiagopadua/workspace_js/cadastro-patrimonio-ng/client_gabari
to/app_ts/app.filters.js:7:25
        at Object.<anonymous> (/Users/tiagopadua/workspace_js/cadastro-patri
monio-ng/client_gabarito/app_ts/app.filters.spec.js:9:20)
        at Object.invoke (/Users/tiagopadua/workspace_js/cadastro-patrimonio
-nng/client_gabarito/bower_components/angular/angular.js:4709:19)
        at Object.workFn (/Users/tiagopadua/workspace_js/cadastro-patrimonio
-nng/client_gabarito/bower_components/angular-mocks/angular-mocks.js:3078:20)
        Error: Declaration Location
            at window.inject.angular.mock.inject (/Users/tiagopadua/workspace_js
/cadastro-patrimonio-ng/client_gabarito/bower_components/angular-mocks/angular-m
ocks.js:3040:25)
            at Suite.<anonymous> (/Users/tiagopadua/workspace_js/cadastro-patrim
onio-ng/client_gabarito/app_ts/app.filters.spec.js:8:43)
            at Suite.<anonymous> (/Users/tiagopadua/workspace_js/cadastro-patrim
onio-ng/client_gabarito/app_ts/app.filters.spec.js:4:5)
            at /Users/tiagopadua/workspace_js/cadastro-patrimonio-ng/client_gaba
rito/app_ts/app.filters.spec.js:2:1
Chrome 51.0.2704 (Mac OS X 10.10.5): Executed 2 of 2 (1 FAILED) (0 secs / 0.049
Chrome 51.0.2704 (Mac OS X 10.10.5): Executed 2 of 2 (1 FAILED) (0.067 secs / 0.
049 secs)
```

```
1  namespace cadpat {
2      'use strict';
3
4      maiusculo.$inject = [];
5      function maiusculo() {
6          return (input: string) => {
7              return (input || '').toUpperCase();
8          };
9      }
10
11     angular
12         .module('cadpatFilters', [])
13         .filter('maiusculo', maiusculo);
14 }
```



DEBUG

Karma v0.12.37 - connected

Chrome 51.0.2704 (Mac OS X 10.10.5) is idle

```
cadastro-patrimonio-ng — npm test — Google Chrome He — 80x24
npm          tsc          node...
-ng/client_gabarito/app_ts/components/home-bens.component.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/app.module.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/directives/ac-cabecalho.directive.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/bem/bem.controllers.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/directives/ac-bt-navegar.directive.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/components/lista-bens.component.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/app.services.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/components/barra-lateral.component.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/app.config.js".
INFO [watcher]: Changed file "/Users/tiagopadua/workspace_js/cadastro-patrimonio
-ng/client_gabarito/app_ts/alerta/alerta.controllers.js".
Chrome 51.0.2704 (Mac OS X 10.10.5): Executed 1 of 2 SUCCESS (0 secs / 0.01 secs
Chrome 51.0.2704 (Mac OS X 10.10.5): Executed 2 of 2 SUCCESS (0 secs / 0.017 sec
Chrome 51.0.2704 (Mac OS X 10.10.5): Executed 2 of 2 SUCCESS (0.018 secs / 0.017
secs)
```

Integrando com outras bibliotecas

```
index.html x app.filters.ts app.filters.spec.js ac-modal-box.directive.ts app.css x
48 <body>
49     <div class="container">
50         <div ng-controller="AlertaController as vm">
51             <uib-alert ng-repeat="alerta in vm.alertas"
52                 type="{{alerta.tipo}}"
53                 close="vm.fecharAlerta($index)">
54                 {{alerta.msg}}
55             </uib-alert>
56         </div>
57
58         <hr>
59
60         <ac-modal-box visible="modalVisible">
61             <h1>Conteúdo da modal</h1>
62         </ac-modal-box>
63
64         <button ng-click="modalVisible = !modalVisible">toggle</button>
65         <span>visível: {{modalVisible}}</span>
66
67         <hr>
68
69         <div ng-view></div>
70     </div>
71 </body>
```

```
ac-modal-box.directive.ts ✘ index.html app.filters.ts app.filters.spec.js ✘ app.css

1  namespace cadpat {
2      'use strict';
3
4      angular.module('cadpat')
5          .directive('acModalBox', acModalBox);
6
7      interface IModalScope extends ng.IScope {
8          visible: any;
9      }
10
11     interface IModalBox extends ng.IAugmentedJQuery {
12         modalBox: (params?: Object) => void;
13     }

```

```
ac-modal-box.directive.ts • index.html app.filters.ts app.filters.spec.js app.css test.ts •\n\n15     acModalBox.$inject = [];\n16     function acModalBox() {\n17\n18         let directive: ng.IDirective = {\n19             template: '<div class="modalBox" ng-transclude></div>',\n20             link: ( scope: IModalScope,\n21                     element: ng.IAugmentedJQuery) => {\n22                 if (scope.visible) {\n23                     showModal();\n24                 }\n25\n26                 function showModal() {\n27                     (<IModalBox>element.children().first())\n28                         .modalBox();\n29                 }\n30             },\n31             scope: {\n32                 visible: '='\n33             },\n34             transclude: true,\n35             restrict: 'E'\n36         };\n37\n38         return directive;\n39     }\n40 }
```

```
let directive: ng.IDirective = {
    template: '<div class="modalBox" ng-transclude></div>',
    link: (scope: IModalScope, element: ng.IAugmentedJQuery) => {
        if (scope.visible) {
            showModal();
        }

        scope.$watch('visible', () => {
            if (scope.visible) { ←
                showModal();
            }
        });
    }

    function showModal() {
        (<IModalBox>element.children().first()).modalBox();
    }
},
scope: {
    visible: '='
},
transclude: true,
restrict: 'E'
};
```

```
let directive: ng.IDirective = {
    template: '<div class="modalBox" ng-transclude></div>',
    link: (scope: IModalScope, element: ng.IAugmentedJQuery) => {
        if (scope.visible) {
            showModal();
        }

        scope.$watch('visible', () => {
            if (scope.visible) {
                showModal();
            }
        });
    }

    function showModal() {
        (<IModalBox>element.children().first()).modalBox({
            onClose: () => {
                scope.visible = false;
            }
        });
    }
},
scope: {
    visible: '='
},
transclude: true,
restrict: 'E'
};
```

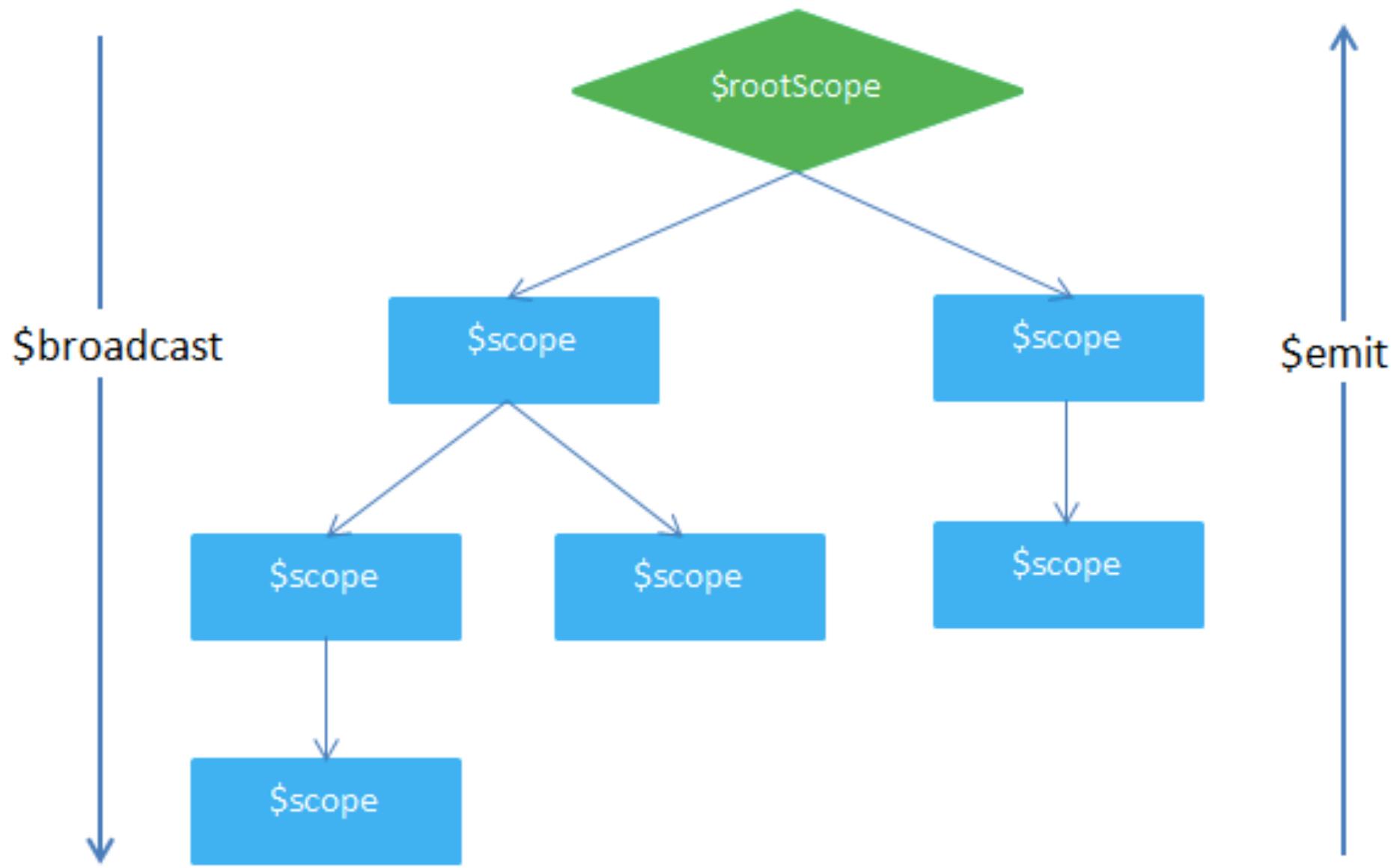
```
acModalBox.$inject = ['$timeout'];
function acModalBox($timeout: ng.ITimeoutService) {

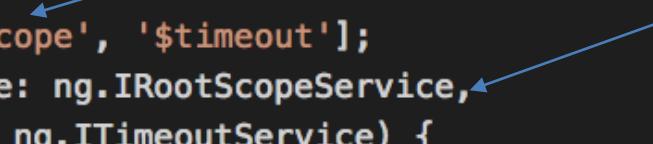
    let directive: ng.IDirective = {
        template: '<div class="modalBox" ng-transclude></div>',
        link: (scope: IModalScope, element: ng.IAugmentedJQuery) => {
            if (scope.visible) {
                showModal();
            }

            scope.$watch('visible', () => {
                if (scope.visible) {
                    showModal();
                }
            });
        }
    };

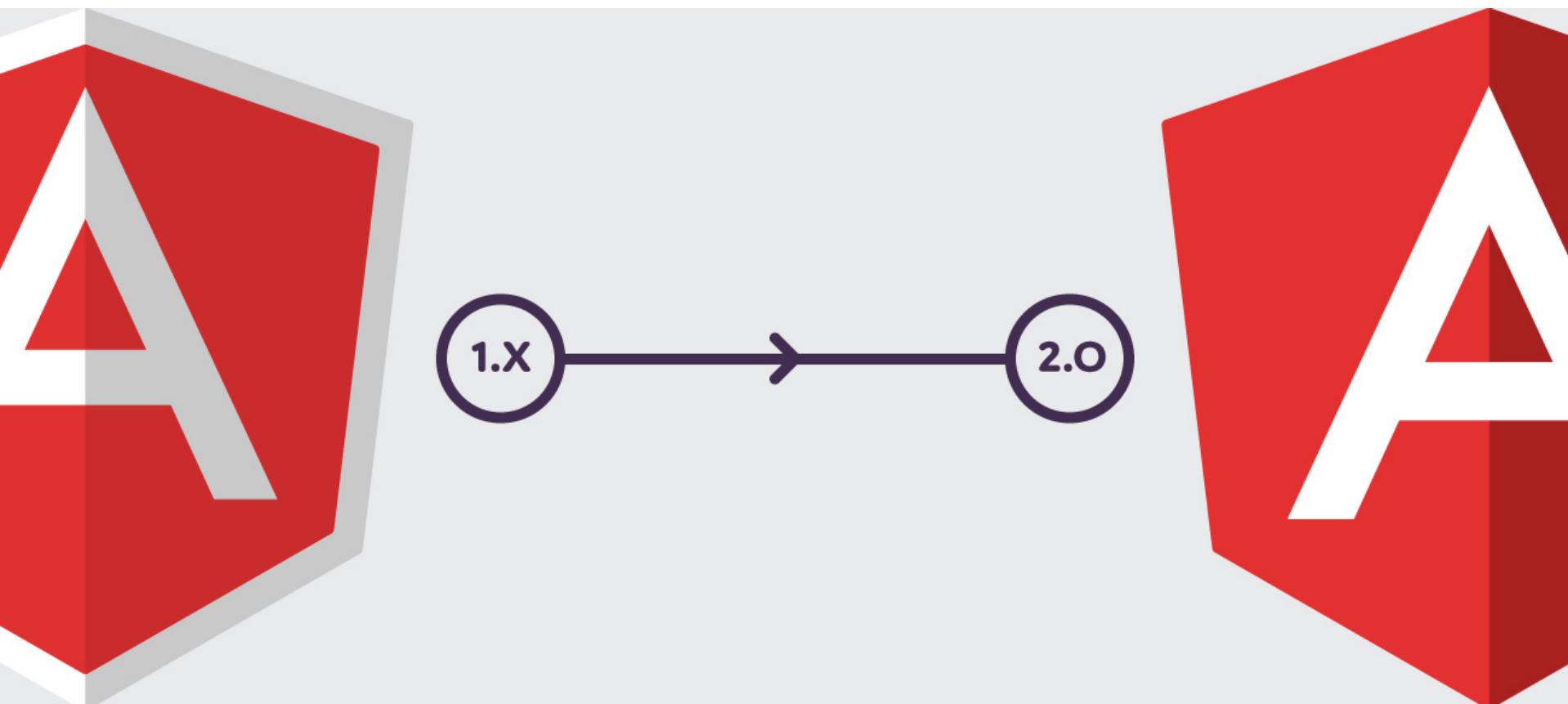
    function showModal() {
        (<IModalBox>element.children().first()).modalBox({
            onClose: () => {
                $timeout(() => {
                    scope.visible = false;
                });
            }
        });
    }
},
```

Enviando e recebendo mensagens



```
14
15     acModalBox.$inject = ['$rootScope', '$timeout'];
16     function acModalBox($rootScope: ng.IRootScopeService, 
17                           $timeout: ng.ITimeoutService) {
18
19         let directive: ng.IDirective = {
20             template: '<div class="modalBox" ng-transclude></div>',
21             link: (scope: IModalScope, element: ng.IAugmentedJQuery) => {
22                 if (scope.visible) {
23                     showModal();
24                 }
25
26                 scope.$watch('visible', () => {
27                     if (scope.visible) {
28                         showModal();
29                     }
30                 });
31
32                 function showModal() {
33                     $rootScope.$broadcast('showModal', new Date());
34                     (<IModalBox>element.children().first()).modalBox({
35                         onClose: () => {
36                             $timeout(() => {
37                                 scope.visible = false;
38                             });
39                         }
40                     });
41                 }, |
```

```
10  export class ListagemController {
11      static $inject: Array<string> = ['$scope', ,
12                                  'BemResource',
13                                  '$window',
14                                  'alertaService'];
15      bens: IItem[];
16      nomePessoa: string;
17
18      constructor(private $scope: ng.IScope, 
25              console.log('Evento recebido: ' + time);
26          });
27
28          this.listar();
29      }
30
31      /////////////////
--
```



```
module.directive('myConfirmation', function() {
  return {
    scope: {},
    bindToController: {
      message: '=',
      onOk: '&'
    },
    controller: function() { },
    controllerAs: 'ctrl',
    template: `
      <div>
        {{ctrl.message}}
        <button ng-click="ctrl.onOk()">
          OK
        </button>
      </div>
    `
  }
});
```

```
@Component({
  selector: 'my-confirmation',
  inputs: ['message'],
  outputs: ['ok']
})
@View({
  template: `
    <div>
      {{message}}
      <button (click)="ok()">OK</button>
    </div>
  `
})
class MyConfirmation {
  okEvents = new EventEmitter();
  ok() {
    this.okEvents.next();
  }
}
```

```
@Component({
  selector: 'products-list',
  inputs: ['products'],
  outputs: ['selected']
  directives: [ProductRow],
  template: `
    <div class="products-list">
      <product-row *ngFor="#product of products"
        [product]="product"
        (click)='clicked(product)'>
      </product-row>
    </div>
  `
})

class ProductsList {
  products: Product[];
  selected: EventEmitter;

  constructor() {
    this.selected = new EventEmitter();
  }

  clicked(product) {
    this.selected.next(product);
  }
}
```

Controller

Template

Controller

Component

Component

Template

Controller

Template

Controller

Component

Component

Component

Component

Component

Component

Component

RESTful API

GET PUT POST DELETE

http://

Verbo HTTP

Seguro

Idempotente

GET



POST



PUT



DELETE



GET**PUT****POST****DELETE**

http://acme.com.br/api/v1/clientes

Lista os clientes	Substitui toda a lista de clientes por outra lista de clientes	Cria um novo cliente, geralmente a URI do cliente criado retorna como resposta	Apaga toda a lista de clientes
--------------------------	---	---	---------------------------------------

http://acme.com.br/api/v1/clientes/42876234

Retorna o cliente identificado pelo código 42876234	Substitui o cliente 42876234 com os dados enviados no request	Geralmente não utilizado	Apaga o cliente 42876234
--	--	--------------------------	---------------------------------

Correto:

/ufs

/clientes

/propostas

Errado:

/produto

/cadastrarCliente

/propostas/excluir



{JSON}

```
{ "users": [
    {
        "firstName": "Ray",
        "lastName": "Villalobos",
        "joined": {
            "month": "January",
            "day": 12,
            "year": 2012
        }
    },
    {
        "firstName": "John",
        "lastName": "Jones",
        "joined": {
            "month": "April",
            "day": 28,
            "year": 2010
        }
    }
]} 
```

Referências

JavaScript

https://developer.mozilla.org/en-US/docs/Web/JavaScript/A_re-introduction_to_JavaScript
http://eloquentjavascript.net/Eloquent_JavaScript.pdf

TypeScript

<https://www.typescriptlang.org/>
<https://www.gitbook.com/download/pdf/book/basarat/typescript>

AngularJS

<https://angularjs.org/>
<http://www.angularjsbook.com/angular-basics/chapters/introduction/>
<https://github.com/johnpapa/angular-styleguide>

Bootstrap

<http://getbootstrap.com/>
<https://angular-ui.github.io/bootstrap/>

NodeJS

<https://nodejs.org/en/>

Visual Studio Code

<https://code.visualstudio.com/>

Visual Studio Code Plugins

Debugger for Chrome	77199	0.3.1	Microsoft JS Diagnostics
Debug your JavaScript code in the Chrome browser, or any other target that s...		README	LICENSE
beautify	32627	0.1.5	HookyQR
Beautify code in place for VS Code			
Angular 1 JavaScript and TypeScript Snippets	31675	0.1.15	johnpapa
Angular 1 JavaScript and TypeScript snippets			
HTML Snippets	31673	0.0.13	Mohamed Abusaid
Full HTML tags including HTML5 Snippets			
TSLint	29216	0.5.24	egamma
TSLint for Visual Studio Code			
jshint	26886	0.10.12	Dirk Baumer
Integrates JSHint into VS Code.			
EditorConfig for VS Code	10258	0.2.7	EditorConfig
EditorConfig Support for Visual Studio Code			

Parte I - Introdução

- a. Introdução ao AngularJS
- b. Diferenças entre a versão 2.0 e 1.5
- c. Conceito de MVC e MVW
- d. Para que serve o AngularJS
- e. Preparando o ambiente de desenvolvimento

Parte II - Conhecimentos Básicos

- a. JavaScript Básico
- b. Utilizando Controllers
- c. Listas – ngRepeat
- d. Utilizando o ngBind
- e. Trabalhando com Formulários
- f. Criando filtros

Parte III – TypeScript

- a. Introdução ao TypeScript
- b. Instalação e configuração
- c. Compilando o primeiro script
- d. Interfaces
- e. Classes
- f. Rodando o script

Parte IV – Módulos, Serviços e Roteamento

- a. Módulos no AngularJS
- b. Services
- c. Factories
- d. Roteamento

Parte V – Diretivas

- a. Diretivas básicas
- b. Diretivas customizadas

Parte VI – UI Bootstrap – AngularUI

- a. Introdução
- b. Instalação e Dependências
- c. Criando uma Build
- d. Accordion
- e. Alertas
- f. Botões
- g. Carrossel
- h. Collapse

Parte VII - Projeto Prático

- a. Criando uma Tabulação Customizada**
- b. Criação de um módulo customizado**
- c. Integração**