



# ANGULARJS

by Google



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# DIA 1

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









[http://bit.ly/material\\_referencia](http://bit.ly/material_referencia)

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

# Parte I

# Introdução

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**  
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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

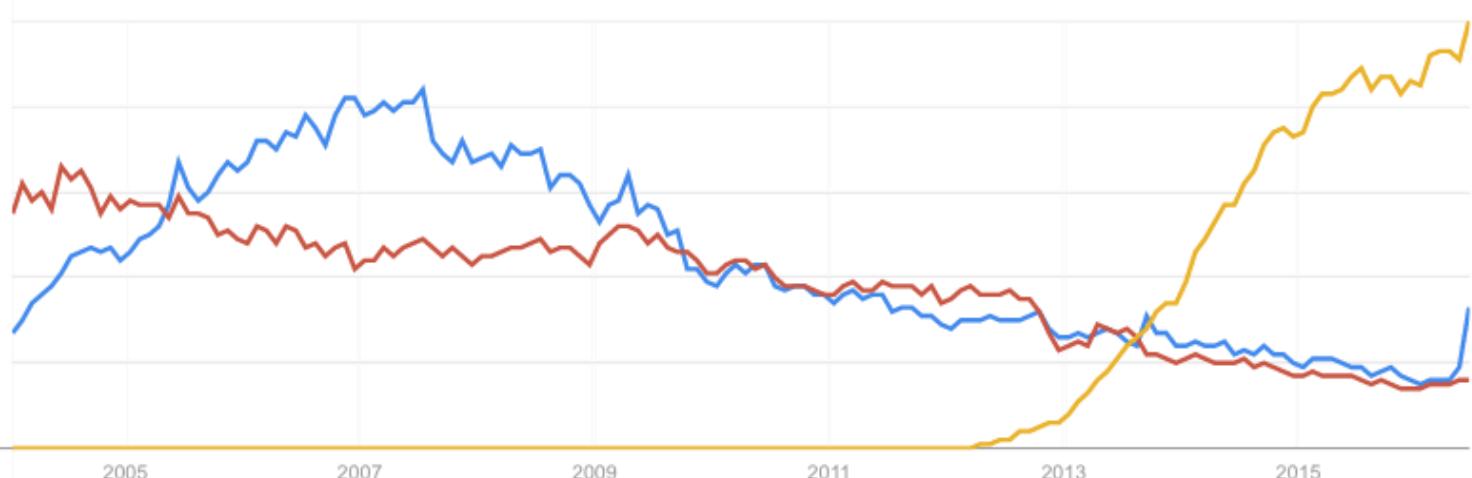
+ Adicionar termo

Interesse com o passar do tempo



Títulos das notícias

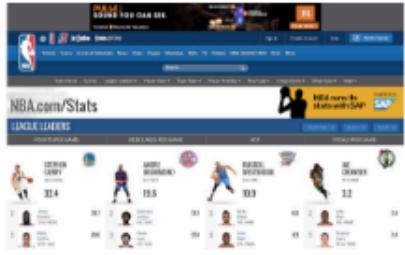
Previsão



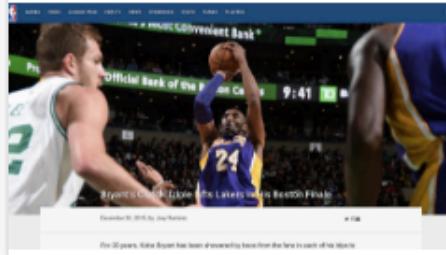
[SEE ALL](#)

## Sports

### NBA.com Stats



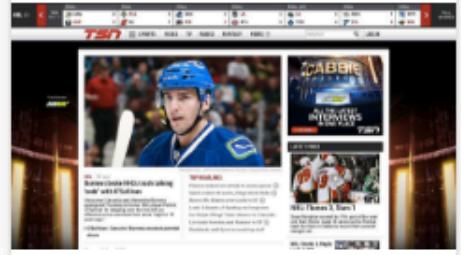
### NBA Global



### Atlantic Coast Conference



### The Sports Network

[SEE ALL](#)

## By Google

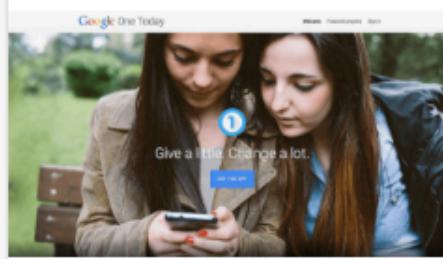
### Google Analytics



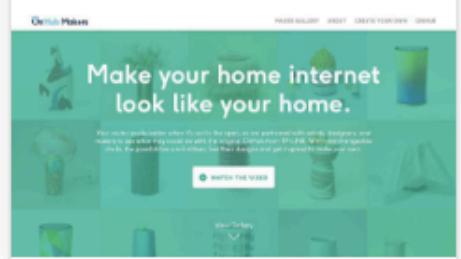
### Android Experiments



### Google One Today

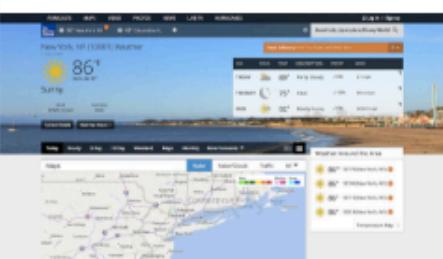


### OnHub Makers

[SEE ALL](#)

## 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 large search bar at the top with the placeholder 'Get Started on Ancestry'. Below the search bar, there are several sections: 'Start your family tree', 'Find your family history', 'Products & Services', and 'Help & Support'. A prominent 'Search' button is located at the bottom of the main content area.

### Britannica.com

This screenshot shows the Britannica.com homepage. It features a header with the 'ENCYCLOPEDIA BRITANNICA' logo. Below the header, there's a section titled 'BRITANNICA STORIES' with various thumbnail images. A sidebar on the left contains links for 'SEARCH', 'TOPICAL INDEX', 'TOPICAL INDEX', 'TOPICAL INDEX', and 'TOPICAL INDEX'.

### Amazon

This screenshot shows the Amazon homepage. At the top, there's a search bar with the placeholder 'Find what you're looking for'. Below the search bar, there are several promotional banners for different products. On the right side, there's a 'Manage Your Content and Devices' sidebar with options for 'Your Content' and 'Your Devices'.

## Transportation

SEE ALL

### Ford

This screenshot shows the Ford website. The main focus is a white Ford Fusion car against a purple and white background. The word 'Fusion' is written vertically next to the car. There are navigation links at the top for 'Home', 'Discover & Drive', 'Technical Info', 'Buying Tools', 'News', 'Features', and 'Inquiries'.

### Blue Origin

This screenshot shows the Blue Origin website. The main headline is 'SOAR WITH BLUE ORIGIN' with a video play button below it. The page has a dark background with blue and white text. Navigation links at the top include 'BLUE ORIGIN', 'About Us', 'Our Story', 'Our Team', 'Our Vehicles', 'Our Missions', 'Our Customers', and 'Our Partners'.

### Lyft

This screenshot shows the Lyft website. It features a photo of two people in a car with the text 'Rides in Minutes'. Below the photo is a pink button labeled 'SIGN UP NOW!' and another button labeled 'TAKE THE WHEEL'. At the bottom, there's a note: 'Want to ride? Take a seat for a rewarding, affordable, and environment-safe. Request a ride on the Lyft app, and get instant service and convenience where you are.'

### sUAS Registration

This screenshot shows the Small Unmanned Aircraft System (sUAS) Registration Service website. It features a drone icon and the text 'Welcome to the Small Unmanned Aircraft System (sUAS) Registration Service'. Below this, there's a section for 'Do I need to Register My Drone?' with a note: 'You will be required to register your sUAS if it weighs between 0.55 lbs. (0.25 kg) and up to 55 lbs. (25 kg)'.

## Finance

SEE ALL

### GoCardless

This screenshot shows the GoCardless software interface. It has a top navigation bar with 'Customers', 'Flow', 'Payments', 'Projects', and 'Jobs'. Below the navigation is a table with columns for 'Name', 'Last Name', 'Address', 'City', 'State', 'Zip', and 'Phone'. The table lists several customers, such as 'Alice Smith', 'Bob Johnson', and 'Charlie Davis'.

### Alpha Bank

This screenshot shows the Alpha Bank mobile banking app. It features a top navigation bar with icons for 'Home', 'Transfer', 'Bill Pay', 'Statement', 'Investments', and 'Loans'. Below the navigation is a section for 'My Account' with a balance of '11,111.00'. There are also sections for 'Transfer', 'Bill Pay', and 'Statement'.

### PayPal Checkout

This screenshot shows the PayPal Checkout website. It features a top navigation bar with 'PayPal.com' and a search bar. Below the navigation is a section with the text 'At PayPal, we put people at the center of everything we do.' and a 'Who we are' section.

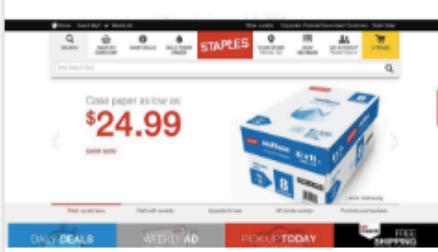
### Wells Fargo Rewards

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

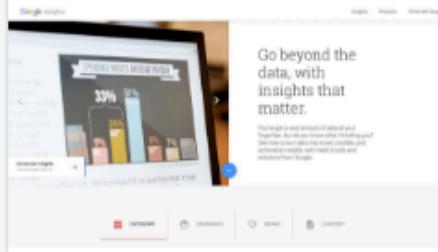
## Business

SEE ALL

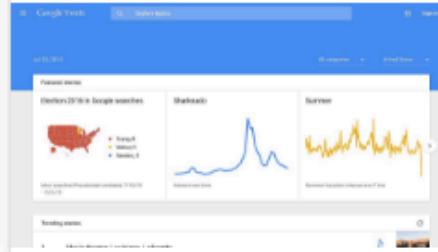
### Staples



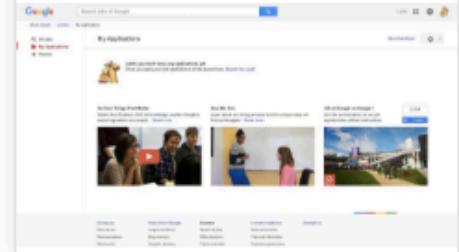
### Google Insights



### Google Trends



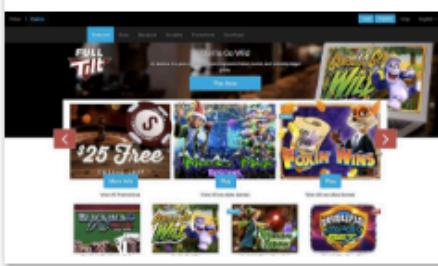
### Google Careers



## Entertainment

SEE ALL

### Full Tilt



### Google Star Wars



### LEGO.com Star Wars



### Lego



## From the Community

SEE ALL

### DevChat.tv



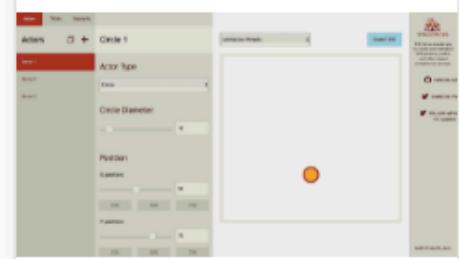
### Che Armstrong



### Provecta POS



### SVG Circus





PRODUTOS E SERVIÇOS

ATENDIMENTO

SOBRE NÓS

BUSCAR

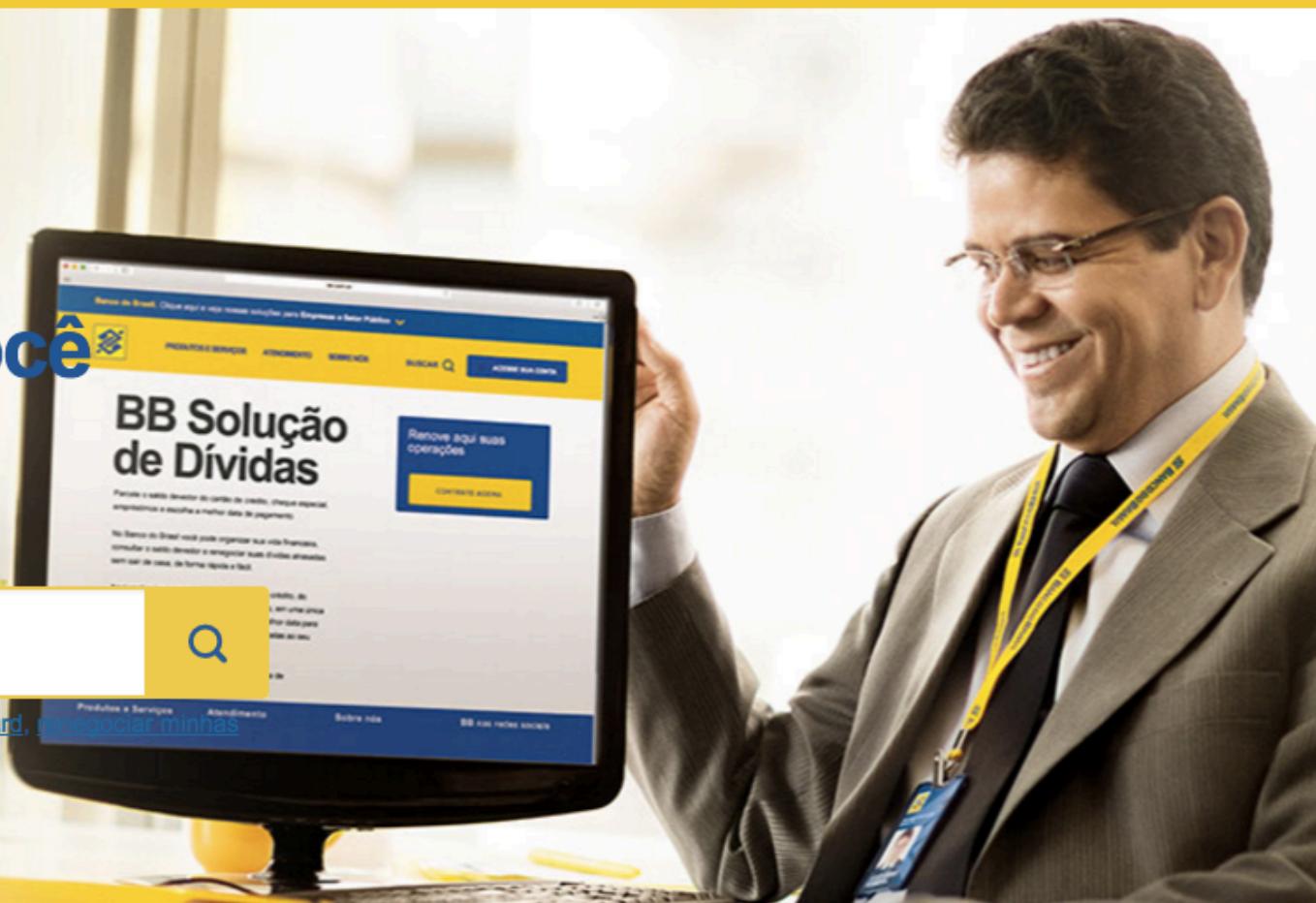
ACESSE SUA CONTA

# Do que você precisa?

Estamos aqui para ajudar



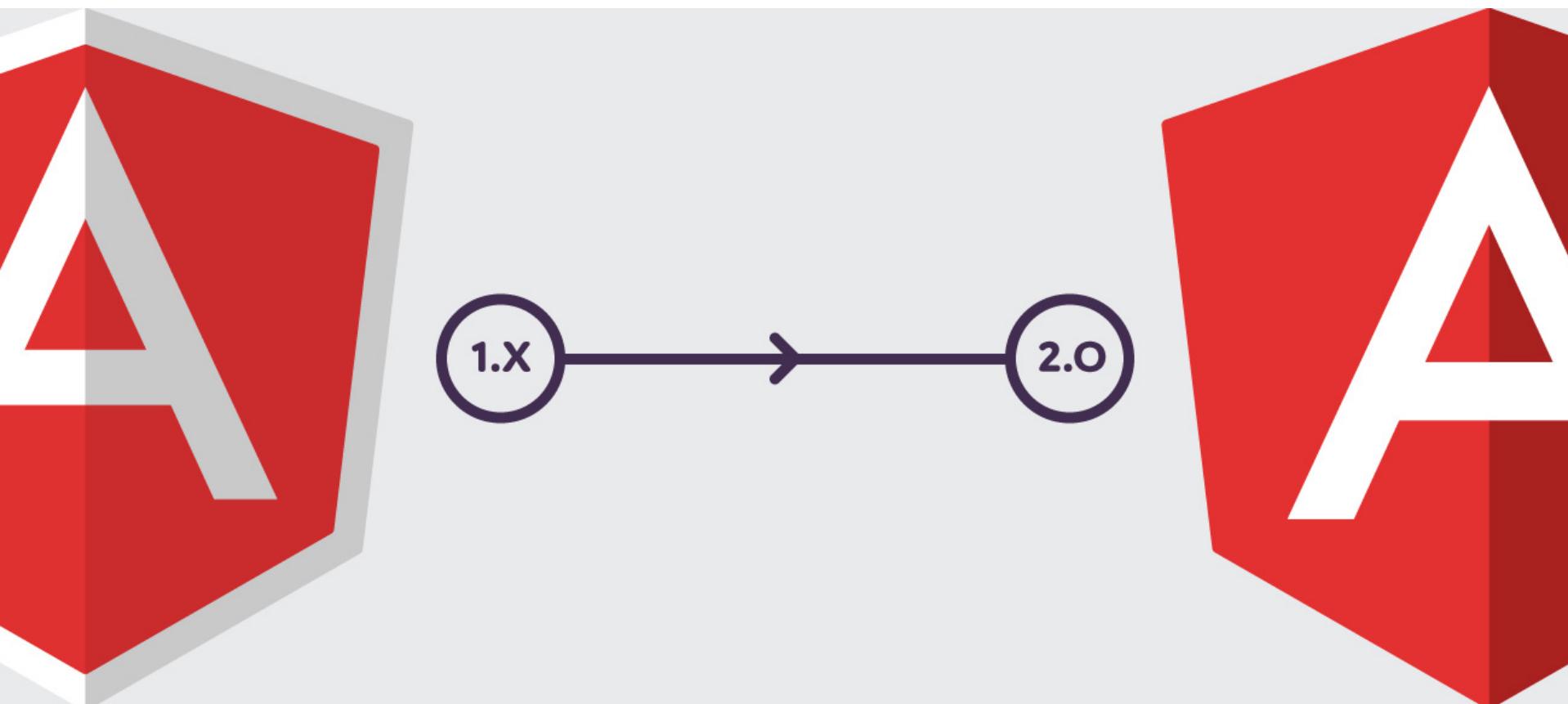
Mais buscados: [carro novo](#), [ouocard](#), [renegociar minhas dívidas](#)



## 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

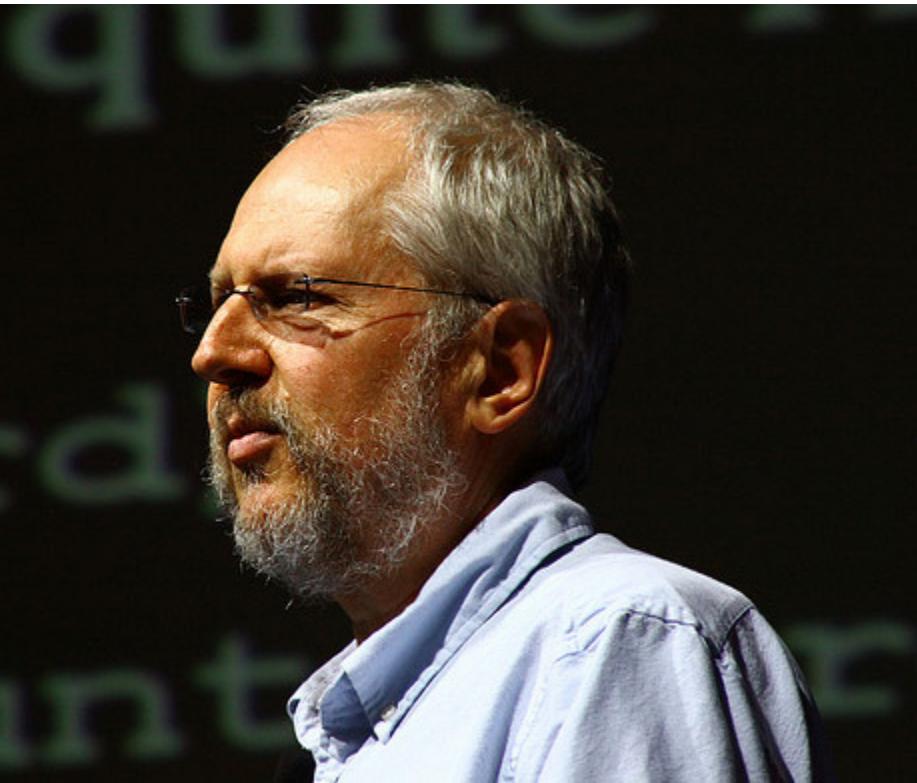
Contains Java™ software developed by Sun Microsystems, Inc.  
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Contains security software from RSA Data Security, Inc.  
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This version supports International security with RSA Public Key Cryptography, 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

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**

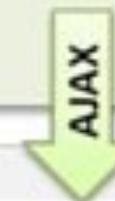
[Cancelar](#)



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



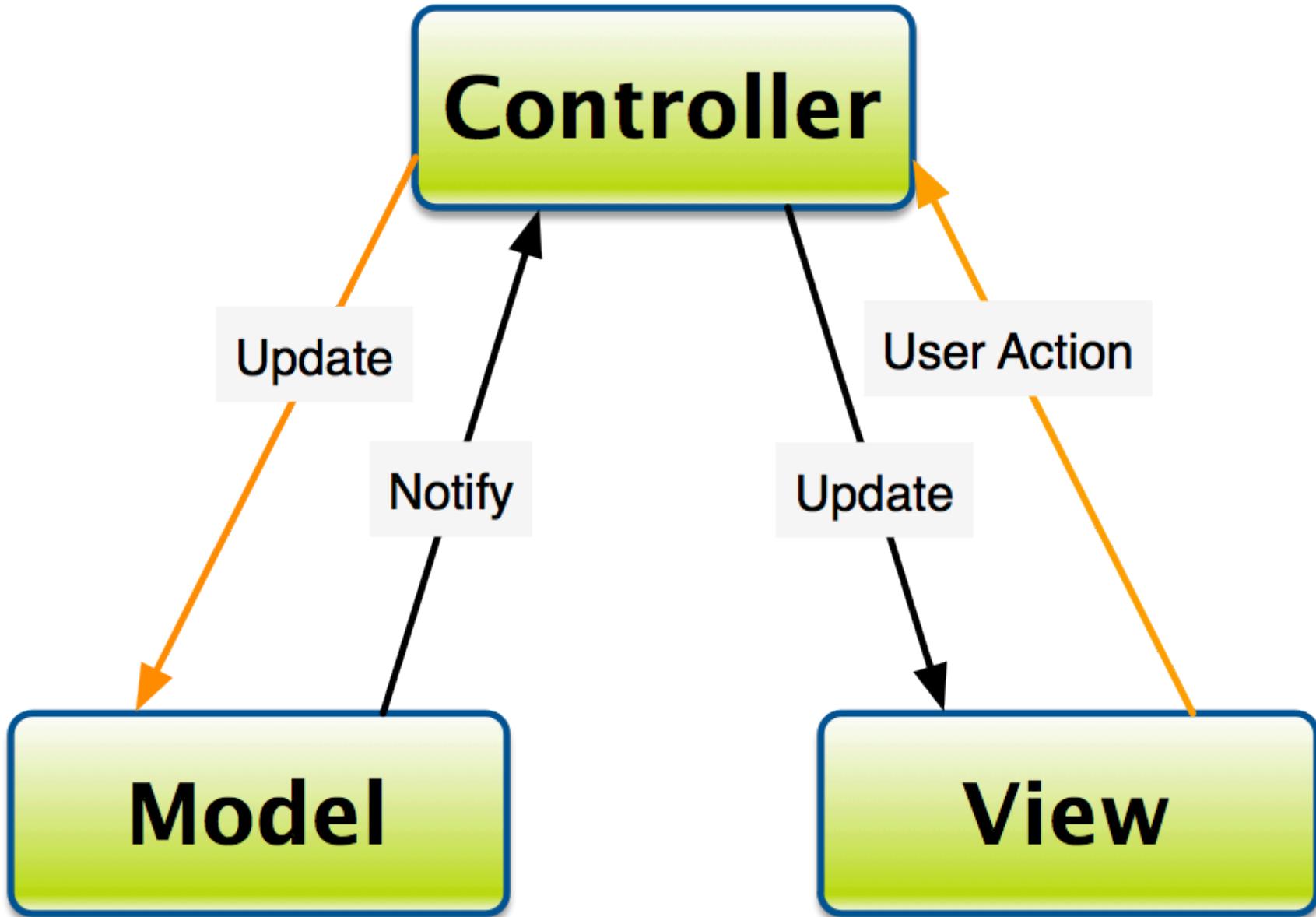
**Prédio do  
Banco Central  
do Brasil -  
BACEN**

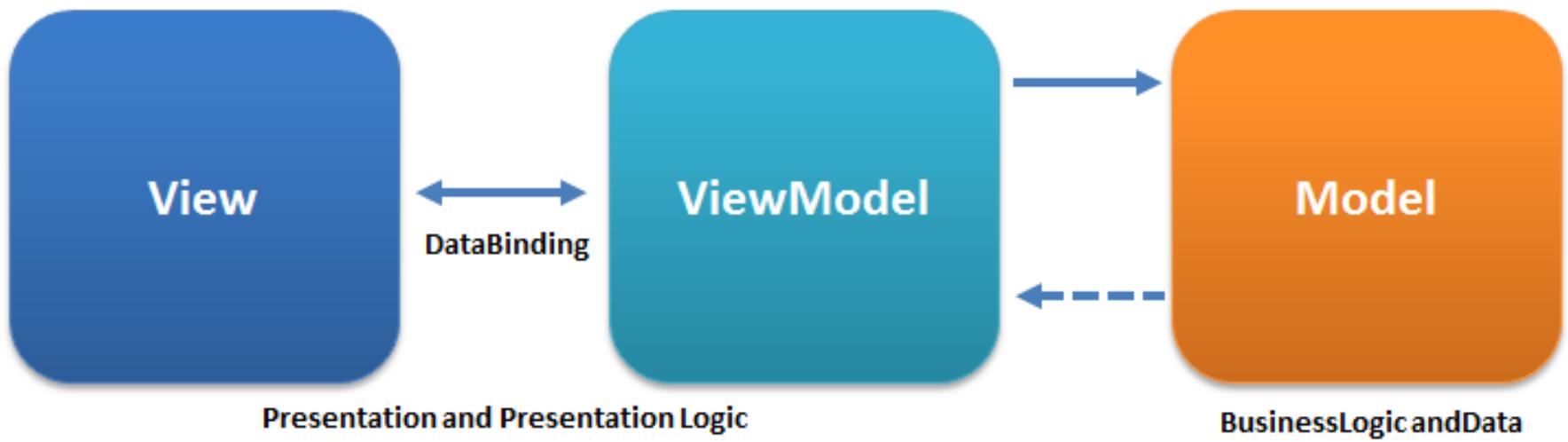


**Palácio dos  
Buritis, sede do  
GDF**



**MVC - MVVM - MVW**





**DIA 4**

# Ferramentas de Debug para o AngularJS



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>
```

Styles

Filter

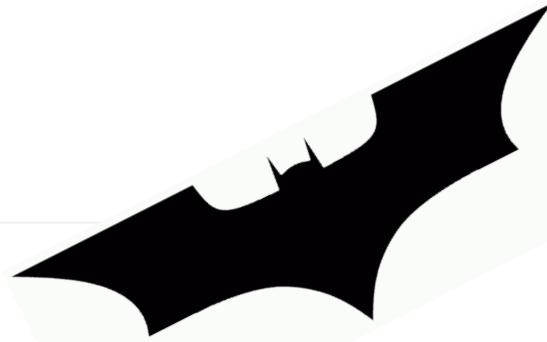
Computed Event Listeners

+ .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 displays 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:

- \$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>
```

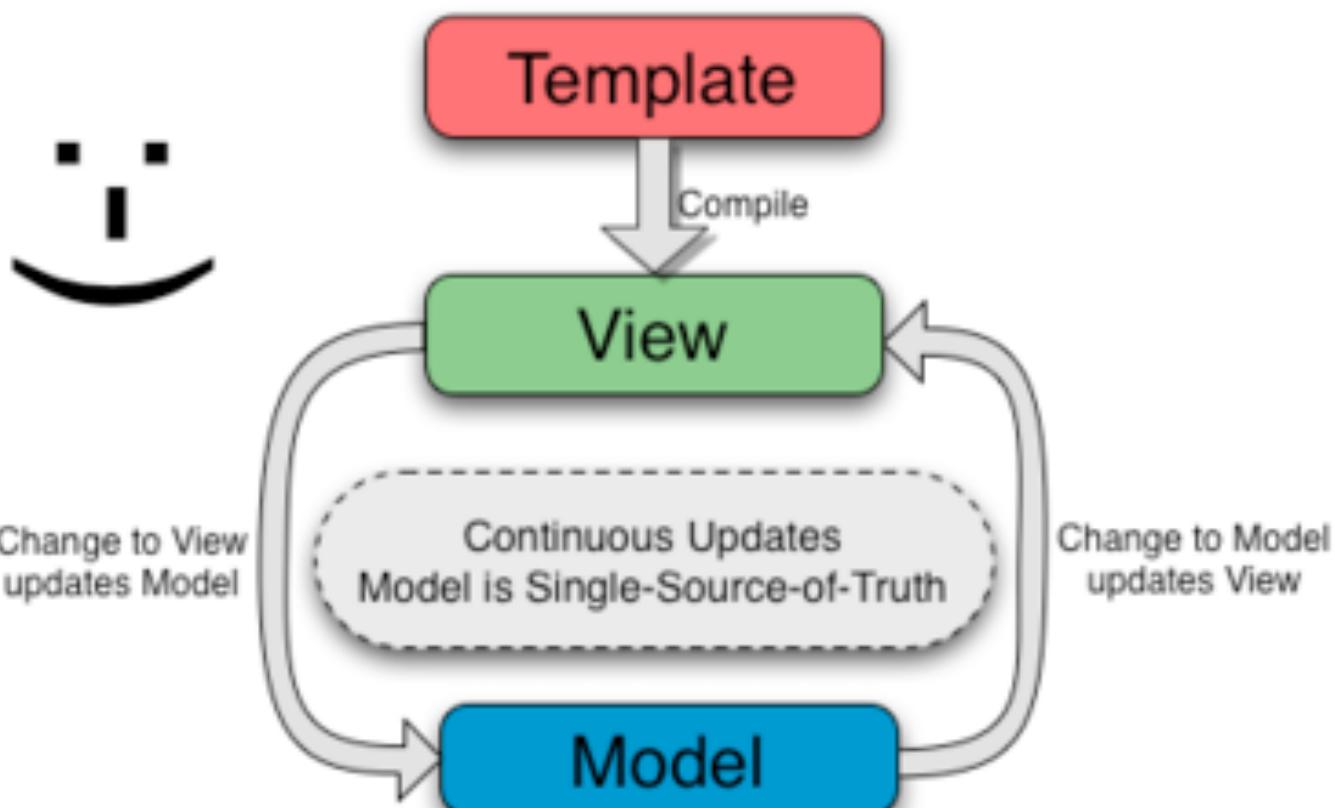
# Buscando dados no servidor

```
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

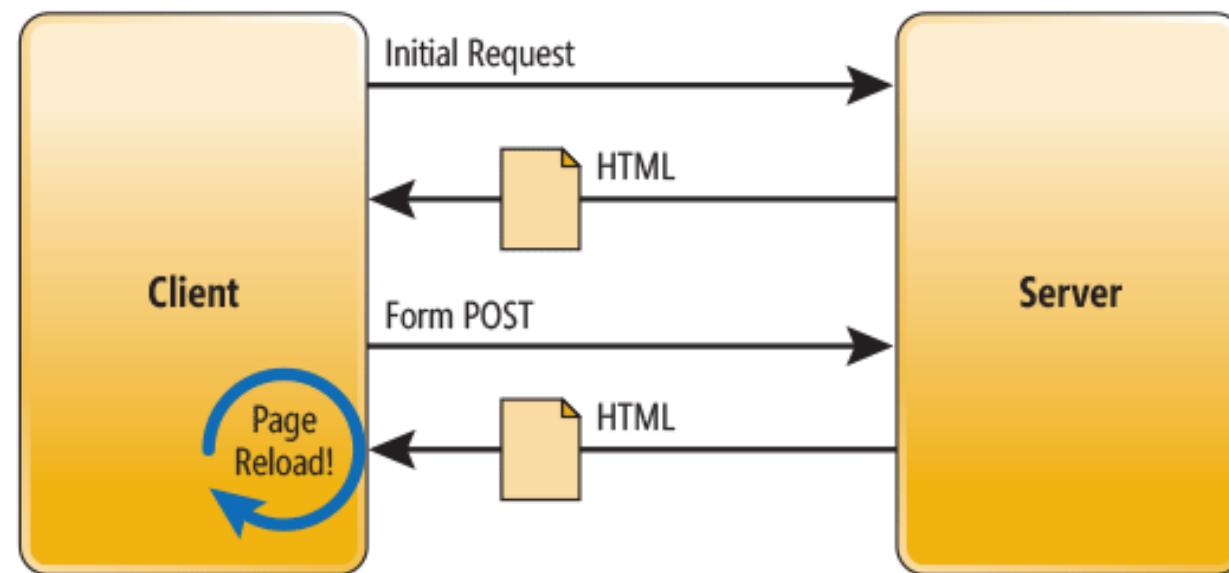
# Parte III

# Módulos, Serviços e

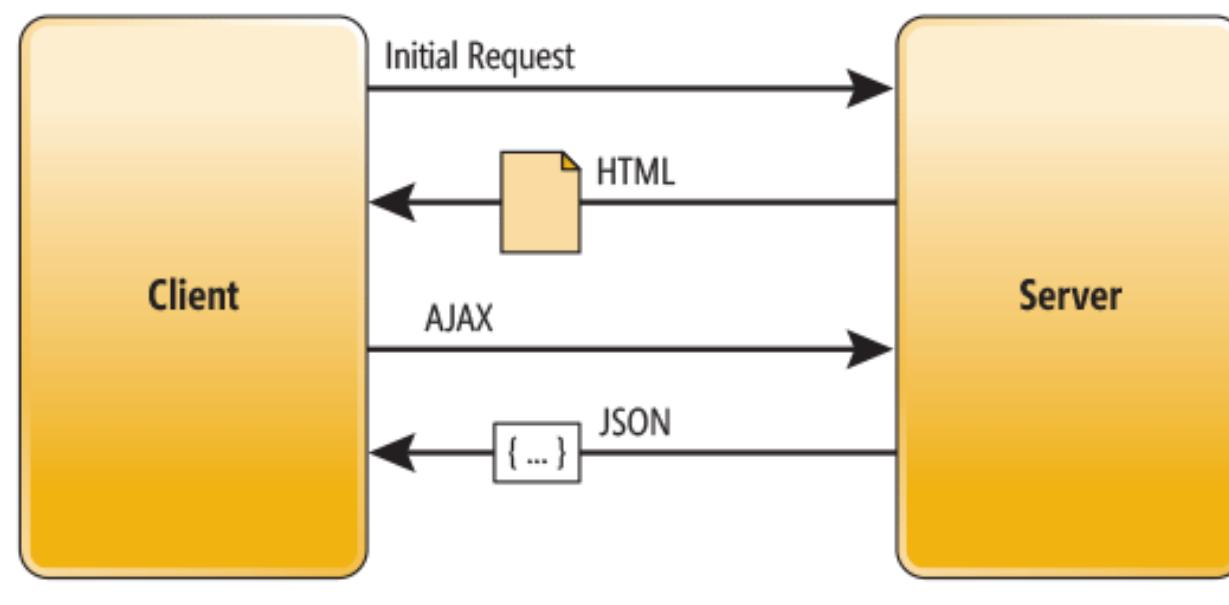
# Roteamento

# 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" style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;">
14                <a class="thumbnail" href="#/detalhe/<span>{{bem.id}}</span>">
15                    
16                    <div class="caption" style="text-align: center; margin-top: 5px;">
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



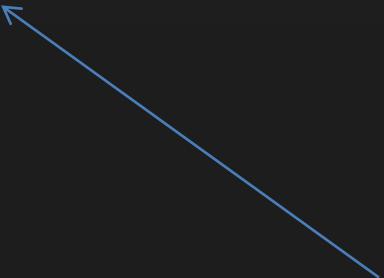
Prédio do Banco  
Central do Brasil  
- BACEN

# 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

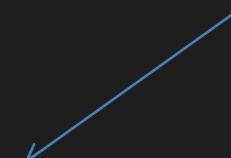
# Acessando o objeto do Fomulário pelo Controller

```
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>
```

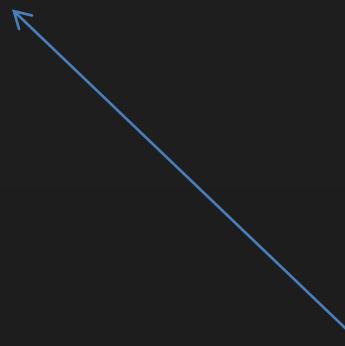
```
7 config.$inject = ['$routeProvider', '$locationProvider'];
8 function config($routeProvider, $locationProvider) {
9     $locationProvider.html5Mode(true);
10
11     $routeProvider
12         .when('/bens', {
13             templateUrl: 'app/bem/bem-lista.html',
14             controller: 'ListagemController',
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

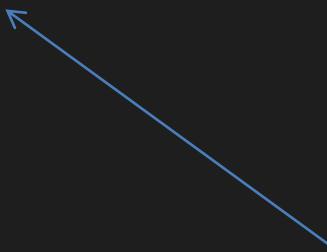
```
angular.module('multiSlotTranscludeExample', [])
.directive('pane', function(){
  return {
    restrict: 'E',
    transclude: {
      'title': '?pane-title',
      'body': 'pane-body',
      'footer': '?pane-footer'
    },
    template: '<div style="border: 1px solid black;">' +
      '<div class="title"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

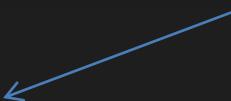
```
barra-lateral.component.ts client/app_ts/components
```

```
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>

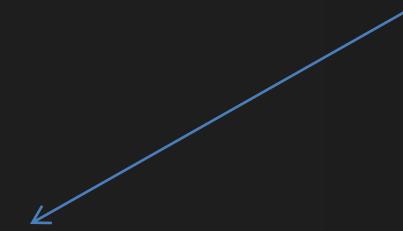
                    <ac-bt-atencao acao="vm.excluir(bem._id)" texto="Excluir">
                    </ac-bt-atencao>
                </div>
            </div>
        </div>
    </div>
</div>
```

```
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

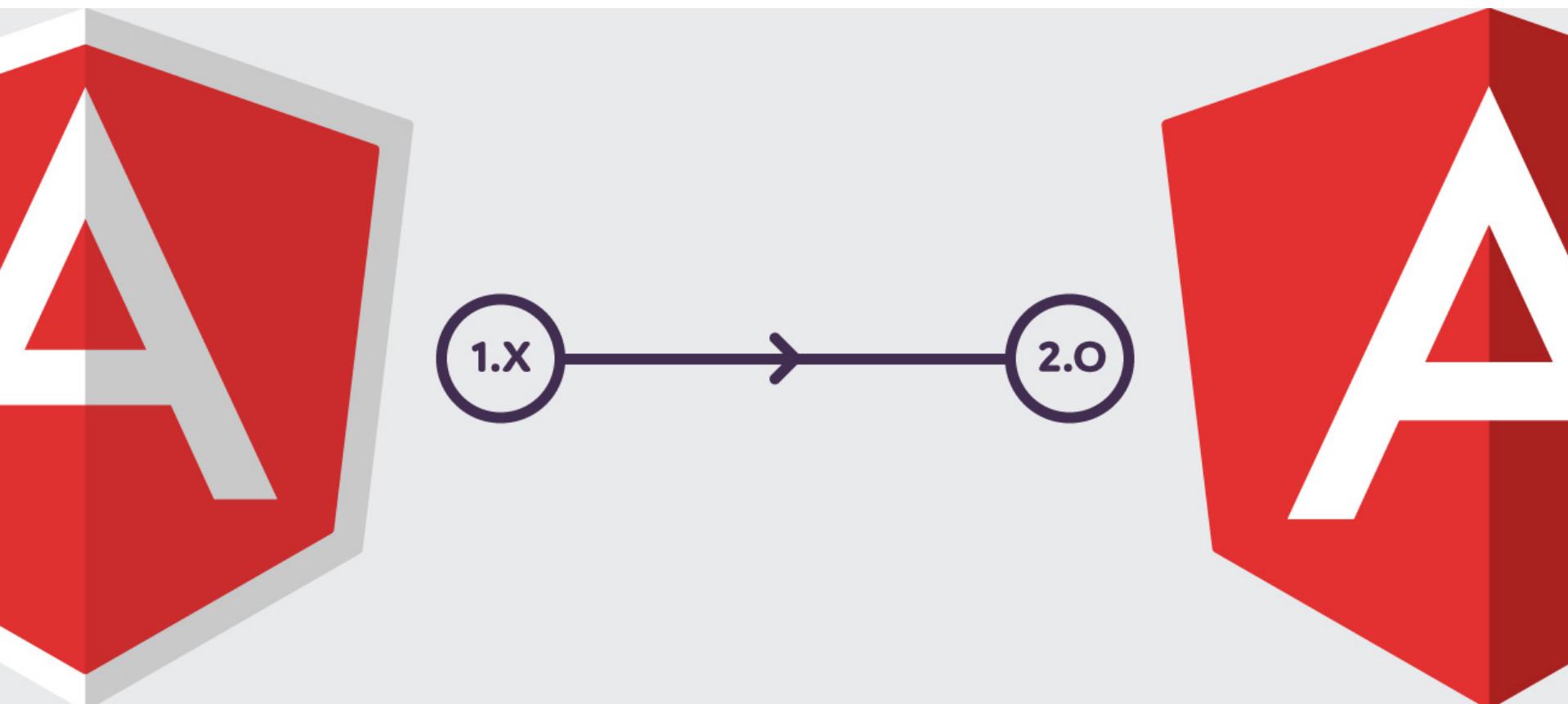
package.json

```
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 };
```

```
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  });
```

**DIA 10**



```
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

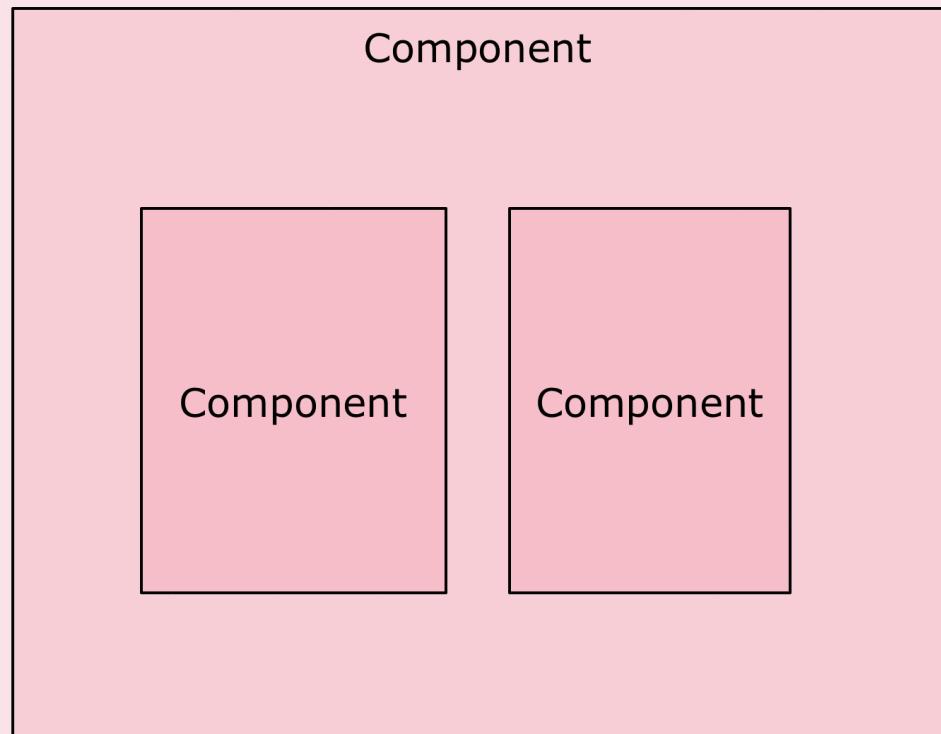
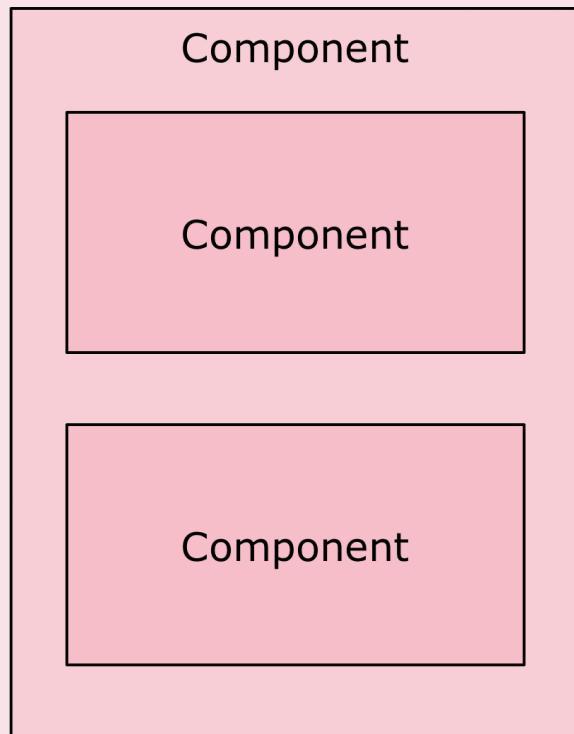
Template

Controller

Template

Controller

Component



# 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**

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

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

<b>Retorna</b> o cliente identificado pelo código 42876234	<b>Substitui</b> o cliente 42876234 com os dados enviados no request	Geralmente não utilizado	<b>Apaga</b> 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
        }
    }
]} 
```

# Parte VII

# Projeto Prático

# Referências

## JavaScript

[https://developer.mozilla.org/en-US/docs/Web/JavaScript/A\\_re-introduction\\_to\\_JavaScript](https://developer.mozilla.org/en-US/docs/Web/JavaScript/A_re-introduction_to_JavaScript)  
[http://eloquentjavascript.net/Eloquent\\_JavaScript.pdf](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...		<a href="#">README</a>	<a href="#">LICENSE</a>
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**