



ANGULARJS

by Google

Victor y Paola
8 de mayo



¿Qué es Angular?



¿qué es angular y para qué sirve

- **Plataforma** para desarrollar aplicaciones web desarrollado en TypeScript.



TypeScript



ANGULARJS



ANGULAR

¿Cuál es la diferencia entre AngularJS y Angular?



ANGULARJS

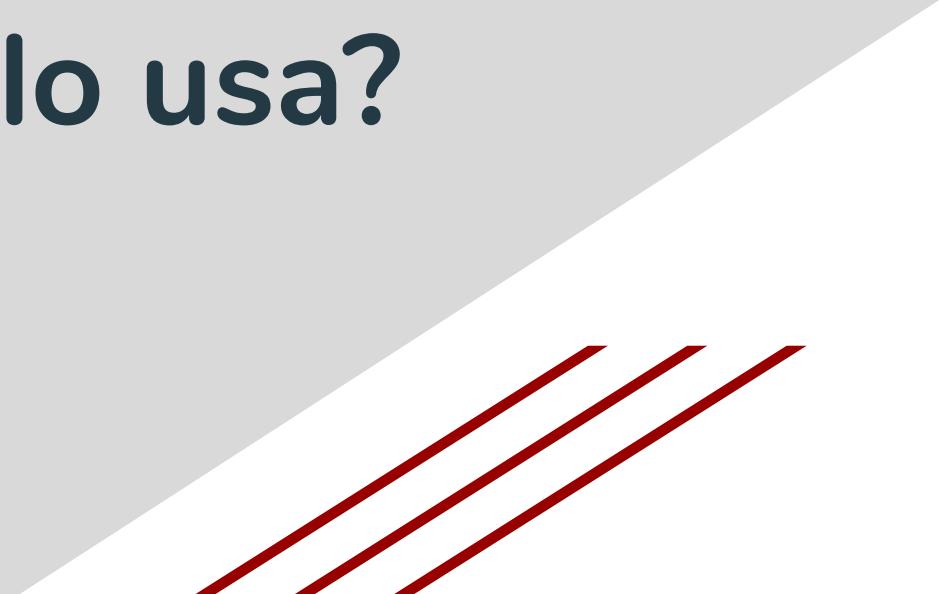
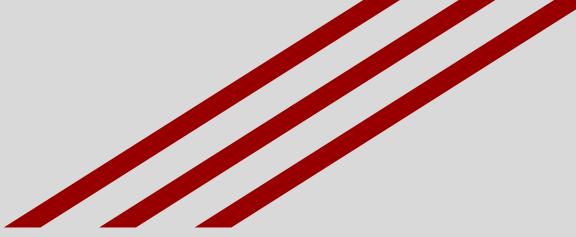


ANGULAR

TypeScript

- Framework de **JavaScript** para crear y mantener aplicaciones web.
- Front-end





¿Quién lo usa?



x

x*x

xsinx

x*y

e^x

x^(1/3)

lnx

x+y+z=1

b

Elementary Math



Physics



Algebra



Chemistry



Dates & Times

Surprise



view-source:<https://www.wolframalpha.com>

Aplicaciones

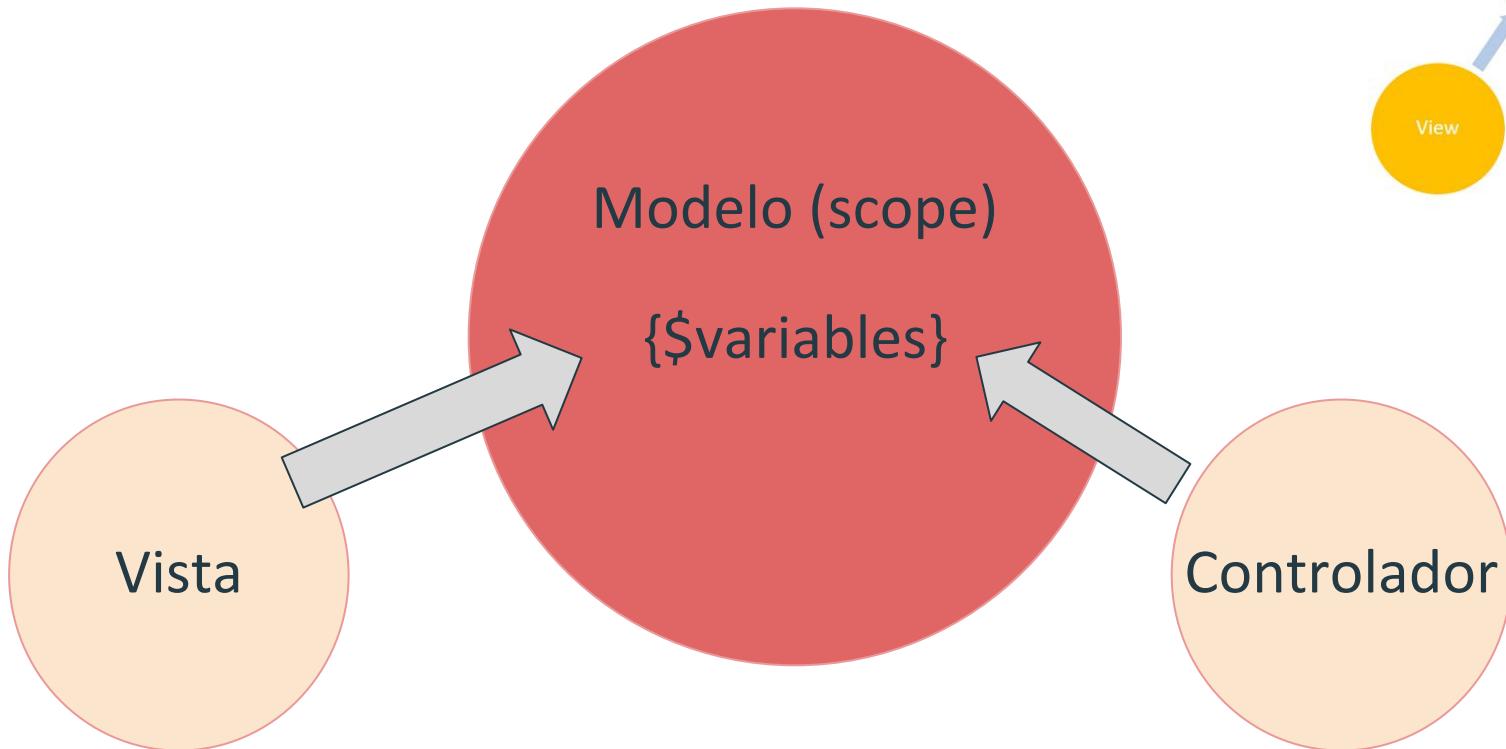
```
1 <!doctype html>
2 <html lang="en-us" id="ng-app" data-ng-app="waApp" data-ng-controller="AppController" d
3   <head>
4     <meta charset="utf-8">
5     <title data-ng-bind="title">Wolfram|Alpha: Computational Intelligence</title>
```

¿Cómo funciona?

1. MVC
2. Directivas



Modelo Vista Controlador



¿Cómo funciona?

1. MVC
2. Directivas



Directivas (-ng-)

Elementos en los nodos que indican al compilador el comportamiento de elementos. (Nativas o propias)



```
1 <!doctype html>
2 <html lang="en-us" id="ng-app" data-ng-app="waApp" data-ng-controller="AppController" d
3   <head>
4     <meta charset="utf-8">
5     <title data-ng-bind="title">Wolfram|Alpha: Computational Intelligence</title>
```

Ejemplos directivas

- ngApp (ng-app)
- ngController (ng-controller)
- ngModel (ng-model)
- ngClick (ng-click)
- ngInit (ng-init)
- ngChange (ng-change)
- ngShow (ng-show) | ngHide (ng-hide)
- ngBind (ng-bind)

Ejemplos directivas

- **ngApp (ng-app)**
- **ngController (ng-controller)**
- **ngModel (ng-model)**
- ngClick (ng-click)
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- ngShow (ng-show) | ngHide (ng-hide)
- ngBind (ng-bind)

ng-app

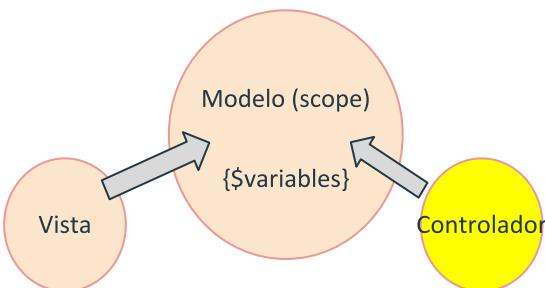
- Encargada de auto arrancar aplicación de AngularJS.
- Se coloca en elemento raíz



`<html ng-app>`

ng-controller

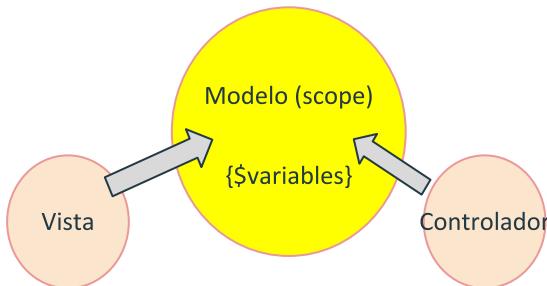
- Define el **controlador** de un elemento



```
<div ng-app="miApp" ng-controller="miCtrl">  
    NombreCompleto: {{nombre + " " + apellido}}  
</div>  
  
<script>  
var app = angular.module('miApp', []);  
app.controller('miCtrl', function($scope) {  
    $scope.nombre = "Octavio";  
    $scope.apellido = "Gonzalez";  
});  
</script>
```

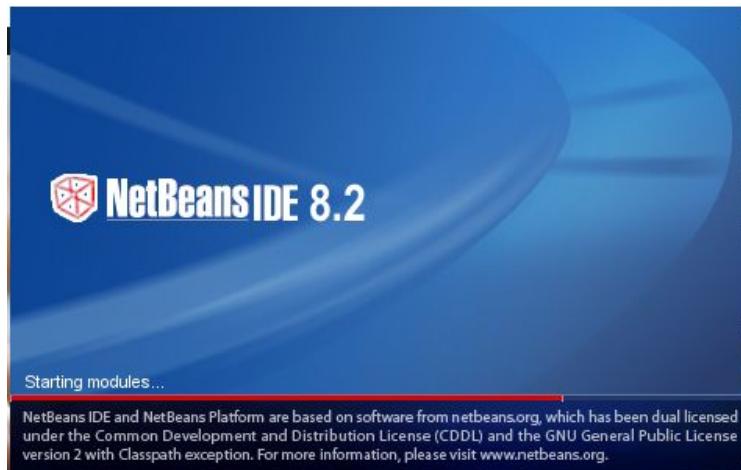
ng-model

- Permite obtener información ingresada por el usuario.



```
<div ng-app="miApp" ng-controller="miCtrl">  
  <input ng-model="name">  
</div>  
  
<script>  
var app = angular.module('miApp', []);  
app.controller('miCtrl', function($scope) {  
  $scope.name = "Octavio";  
});  
</script>
```

Hola mundo!



New Project

Steps

1. Choose Project
2. ...

Choose Project

Filter:

Categories:

- Java
- JavaFX
- Java Web
- Java EE
- HTML5/JavaScript
- Java ME Embedded
- Java Card
- Maven
- PHP
- Groovy
- C/C++

Projects:

- Web Application
- Web Application with Existing Sources
- Web Free-Form Application

Description:

Creates an empty **Web application** in a standard IDE project. A standard project uses an **IDE-generated build script** to build, run, and debug your project.

New Web Application

Steps

1. Choose Project
2. **Name and Location**
3. Server and Settings
4. Frameworks

Name and Location

Project Name:

Project Location:

Project Folder:

¿Qué directiva usamos para auto-arrancar la aplicación?

```
<html ng-app = "miApp"> <!-- Auto-arranca aplicación -->
  <head>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width
      ....
```

Agregar funcionalidad (sin instalar nada extra)

```
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.7.8/angular.min.js"></script>
```

```
-->
<html ng-app = "miApp"> <!-- Auto-arranca aplicación -->
  <head>
    <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.7.8/angular.min.js"></script>
    <title>Mi primera página con directivas de AngularJS</title>
```

https://ajax.googleapis.com/ajax/libs/angularjs/1.7.8/angular.min.js

Aplicaciones

```
/*
AngularJS v1.7.8
(c) 2010-2018 Google, Inc. http://angularjs.org
License: MIT
*/
(function(C){'use strict';function re(a){if(D(a))w(a.objectMaxDepth)&&(Wb.objectMaxDepth=Xb(a.objectMaxDepth))a.objectMaxDepth:NaN},w(a.urlErrorParamsEnabled)&&G(a.urlErrorParamsEnabled)&&(Wb.urlErrorParamsEnabled=a.urlErrorParamsEnabled);else return Wb}function Xb(a){return W(a)&&!a.functionF||!b[a]||Error;return function(){var d=arguments[0],c=[["+a?at":""]];d+=";for(d=1;d<arguments.length;d++){c=c+(1==d?"~":"")+(d-1)+"=";var e=encodeURIComponent,f=d.arguments[d];f.function==typeof f?f.toString().replace(/\[\s\S*\$|,"":undefined==typeof f?"undefined":string":typeof f:f;c+=e(f))return new b(c)}function ya(a){if(null==a||$a(a))return 1;if(H(a)||A(a)||x&&a instanceof x))return 0;var b="length"in Object(a)&a.length;return W(b)&&(0<b&b-1 in a||"function"==typeof a.item)function r(a,b,d){var c,e;if(a.if(B(a))for(c in a)"prototype"!=c&&"length"!=c&&"name"!=c&&a.hasOwnProperty(c)&&b.call(d,a[c],c,a);else if(H(a))ya(a).var f="object";a==0;for(e=a.length;e<c+1)f||c in a)&&b.call(d,a[c],c,a);else if(a.forEach&a.forEach!=r)for(c in a)a.call(d,a[c],c,a);else if("function"==typeof a.hasOwnProperty)for(c in a)a.hasOwnProperty(c)&&b.call(d,a[c],c,a);else for(c in a)t.call(a,c)&&b.call(d,a[c],c,a);return a}function Oc(a,b,d){for(var c=Object.keys(a).sort(),e=0;e<c.length;e++)b.call(d,a[c[e]],c[e]);return c}function Yb(a){return function(b,d){a(d,b)}function se(){return p+b}function Zb(a,b,d){for(var c=a.$hashKey,e=0,f=b.length;e<f;+e){var g=b[e];if(D(g)||B(g))for(var k=Object.keys(g),h=0,l=k.length;h<l;h++)g[k[h]]=p.cloneNode(!0);$b(p)?a[m].p.clone():(D(a[m])||(a[m]+h(p)){!}:{}),zb(a[m],a.$hashKey);return a}function S(a){return Zb(a,Ha.call(arguments,1),!1)}function te(a){return Zb(a,Ha.call(arguments,1),!0)}function ia(a){return Zb(a,Ha.call(arguments,1),!1)}function E(){function Ta(a){return a}function w(a){return a}function D(a){return null}a==0"object"==typeof a&&Pc(a))function A(a){return "string"==typeof a}function W(a){return "number"==typeof a}function H(a){return Array.isArray(a)||a instanceof Array}function cc(a){switch(la.call(a)){case "[object DOMException]":return !0;default:return a instanceof Error}}function B(a){return "function"==typeof a}function ab(a){return "[object RegExp]"==la.call(a)}function $a(a){return a&&a.window==a}function bb(a){return a&&a.$evalAsync&&a.$watch}function Ga(a){return "boolean"==typeof a}function ue(a){return a&&a.length&&e.test(la.call(a))}function $b(a){return !(a||!(a.nodeName||a.propName||a.attName&a找准))function we(a){var b=a.split(",");var d;for(d=0;d<a.length;d++)b[d]=!0;return b}function ua(a){return K(a.nodeName||a[0].nodeName||a[0].nodeType}function cb(a,b){var d=a.indexOf(b);0<=d&&a.splice(d,1);return d}function Ia(a,b,d){function c(a,b,c){c-->0?c>0?return "...":var d=b.$hashKey,f;if(H(a)){f=0;for(var g=a.length;f<g;f++)b.push(e[a[f],c]);else if(Nc(a))for(f in a)b[f]=e[a[f],c];else if(a.function==typeof a.hasOwnProperty)for(f in a)a.hasOwnProperty(f)&&(b[f]=(a[f],c));else for(f in a)t.call(a,f)&&b[f]=e[a[f],c]);d2.b.$hashKeyed:delete b.$$hashKey;return b}function e(a,b){if(!D(a))return a;var d=g.indexOf(a);if(-1==d)return k[d];if($a(a)||bb(a))throw pa("cpws");var d!=1,e=f(a);void 0==e&&(e=H(a)?[]:Object.create(Pc(a)),d!=0);g.push(a);k.push(e);return d?c(a,e,b):e}function f(a){switch(la.call(a)){case "[object Int8Array]":case "[object Uint8Array]":case "[object Int16Array]":case "[object Uint16Array]":case "[object Int32Array]":case "[object Uint32Array]":return new a.constructor(e(a.buffer),a.byteOffset,a.length);case "[object ArrayBuffer)":if([a.slice]{var b=new ArrayBuffer(a.byteLength);set(new Uint8Array(b));return b})return a.slice(0);case "[object Boolean]":case "[object Number]":case "[object String]":case "[object Date]":return new a.constructor(a.valueOf());case "[object RegExp]":return b=new RegExp(a.source,a.toString()).match("[^/]*$/[0]"),b.lastIndex=a.lastIndex,b;case "[object Blob)":return new a.constructor([a],{type:a.type})if(B(a.cloneNode))return a.cloneNode(!0)}var g=[],k=1;d=xb(d)?NaN;if(b){if(ue(b)||"[object ArrayBuffer]"==la.call(b))throw pa("cptb");if(a==b)throw pa("cip");H(b);b.length=0:r(b,function(a,c){$hashKey"!=c&&delete b[c]});g.push(a);k.push(b);return c(a,b)}function dc(a,b){return a==b||[a]==a&&b==b}function va(a,b){if(a==b)return !0;if(null==a||null==b) return !1;if(a==a&&b==b) return !0;var d=typeof a,c;if(d==typeof b&&"object"==d)if(H(a)){if(!H(b))return !1;if((d=a.length)==b.length){for(c=0;c<d;c++)if(!va(a[c],b[c]))return !1;return !0}}else if((ha=a).return ha(b)?dc(a.getTime(),b.getTime()):!1;if(ab=a).return ab(b)?
```

Mi primer página con directivas de AngularJS

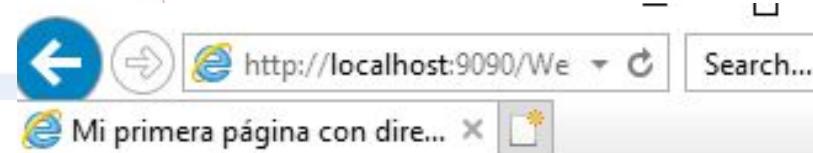
```
<div ng-model="nombre" ng-controller="miCtrl"> {{nombre}}</div>
```

```
<script>
    var app = angular.module('miApp', []);
    app.controller('miCtrl', function ($scope) {
        $scope.nombre = "Octavio";
    });
</script>
```

```
-->
<html ng-app = "miApp"> <!-- Auto-arranca aplicación -->
  <head>
    <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.7.8/angular.min.js"
    <title>Mi primera página con directivas de AngularJS</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <div>Mi primera página con directivas de AngularJS</div>

    <div ng-model="nombre" ng-controller="miCtrl"> {{nombre}}</div>

    <script>
      var app = angular.module('miApp', []);
      app.controller('miCtrl', function ($scope) {
        $scope.nombre = "Octavio";
      });
    </script>
  </body>
</html>
```



Mi primera página con directivas de AngularJS
Octavio

¿Qué se puede mejorar
de JavaScript y de
HTML?



Posibles mejoras

1. Variables dinámicas
2. Repeticiones(directiva)
3. Requests GET, POST, PUT, DELETE, JSONP, HEAD & PATCH
4. Directivas propias

#NOSABÍAQUELONECESITABA

Variables Dinámicas

- Vistas dinámicas en aplicaciones.

The screenshot shows the Wolfram Alpha input interface. At the top is a red star logo followed by the word "Wolfram". Below the logo is a search bar containing the letter "x". A yellow rectangular highlight is placed over the "x" in the search bar. Below the search bar is a list of mathematical functions:

- x^x
- xsinx
- x*y
- e^x^(1/3)

Name:

Paola

JavaScript

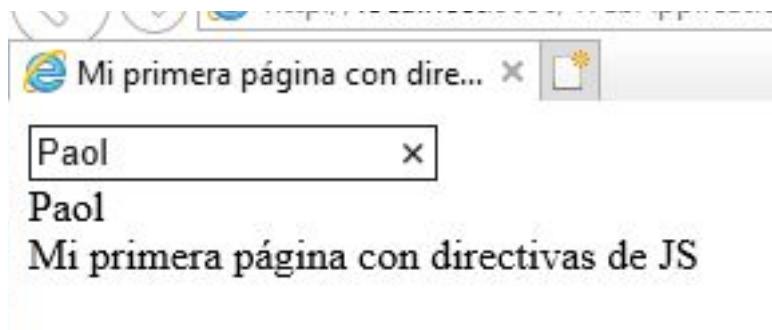
```
<input type="text" id="nombre" onkeyup="caminoLargo()>
<div id = "repiteNombre"></div>

<script>
function caminoLargo() {
    var original = document.getElementById("nombre");
    var nuevo = document.getElementById("repiteNombre");
    element.innerHTML = original;
}
</script>
```

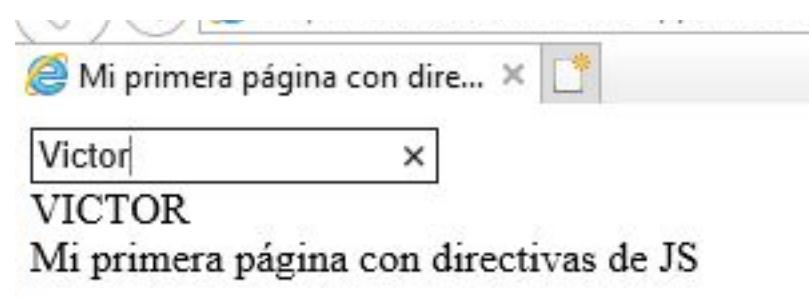
AngularJS

```
<input type="text" ng-model="nombre">
<div> {{nombre}} </div>
```

Retos:



(1)



(2)

Posibles mejoras

1. Variables dinámicas
2. Repeticiones(**directiva**)
3. Requests GET, POST, PUT, DELETE, JSONP, HEAD & PATCH
4. Directivas propias

#NOSABÍAQUELONECESITABA

Repeticiones

- Hacer copias de elementos
- ng-repeat

Field name:	nombre	Type:	Varchar ▾
Field name:	apellidos	Type:	Varchar ▾
Field name:	edad	Type:	Integer ▾
Field name:	salario	Type:	Double ▾
Add field		Remove field	

Todo

4 of 4 remaining [archive]

- Un nuevo elemento
- Otro elemento
- Uno más
- Y más

add new todo here

add

Deberían/Podrían
haber más **inputs**

Ejemplo repeticiones

```
<div ng-controller ="miCtrl">
    <div ng-repeat="nombre in nombres"> {{nombre|lowercase}}</div>
</div>

<script>
    var app = angular.module('miApp', []);
    app.controller('miCtrl', function ($scope) {
        $scope.nombres = ["Pedro", "Andrea", "Aline"]
    });
</script>
```

PEDRO
ANDREA
ALINE

Reto:

The screenshot shows a web application running at <http://localhost:9090/WebApplicationAngularJS/>. The browser has two tabs open, both titled "Mi primera página con directiv...". The main content area displays a heading "Mi primera página con directivi" followed by a list of names in input fields: "Juan Pablo", "juan pablo", "Ricardo", and "ricardo". Below this list is an empty input field and a "Agrega" button.

Tips:

- ng-repeat itera sobre listas
- Se pueden crear listas vacías en scope
- push agrega elementos a listas

Posibles mejoras

1. Variables dinámicas
2. Repeticiones(directiva)
3. Requests **GET, POST, PUT, DELETE, JSONP, HEAD & PATCH**
4. Directivas propias

#NOSABÍAQUELONECESITABA

Requests GET, POST, PUT, DELETE, JSONP, HEAD & PATCH

Insert Form

Action:

Method: GET
 POST

Encoding: application/x-www-form-urlencoded
 multipart/form-data

Name:

HTML form	AngularJS
GET	GET
POST	POST
PUT	PUT
DELETE	DELETE
JSONP	JSONP
HEAD	HEAD
PATCH	PATCH

```
var app = angular.module('miApp', []);
app.controller('miCtrl', function ($scope, $http) {

$http({
method: 'GET',
url: '/sampleUrl'
})

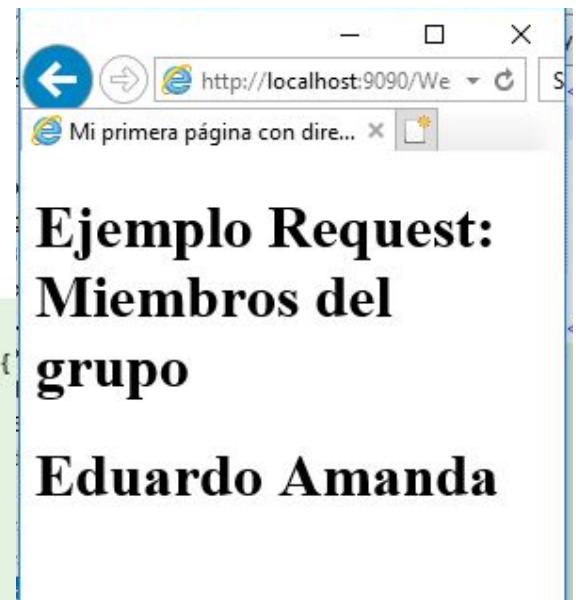
.then(function success(response) {
// Recibio respuesta
}, function error(response) {
// Error
});
});
```

Ejemplo

```
<body>
    <h1>Ejemplo Request: Miembros del grupo</h1>

    <div ng-app="serviceApp" ng-controller="serviceCtrl">
        <h1>{{alumnos}}</h1>
    </div>

    <script type="text/javascript">
        var app = angular.module('serviceApp', []);
        app.controller('serviceCtrl', function ($scope, $http) {
            $http({
                method: 'PUT',
                url: 'prueba.html'
            }).then(function success(response) {
                $scope.alumnos = response.data;
            }, function error(response) {
            });
        });
    </script>
```



**Ejemplo Request:
Miembros del
grupo**

Eduardo Amanda

Posibles mejoras

1. Variables dinámicas
2. Repeticiones(directiva)
3. Put (post, get)
4. Directivas propias

#NOSABÍAQUELONECESITABA

Directivas propias (ng-itam)

Permite:

- Inventar sintaxis de HTML.
- Reusar componentes
 - Se crean con la función: .directive
 - ParaNombrarSeUsaNotaciónCamello
 - Para-invocar-se-separa-con-guiones
 -



Ejemplo: Directiva ITAM

```
<directiva-sistemas-distribuidos></directiva-sistemas-distribuidos>
```

Dentro de script:

```
app.directive("directivaSistemasOperativos", function() {  
  return {  
    template : "<h1>Lo logramos!</h1>"  
  };  
});
```

Reto:

- Crear una directiva para crear elementos como el del reto 1

Tips:

- template: “[codigo html]”



¿Preguntas?



¿Dónde puedo aprender más?

<https://docs.angularjs.org/tutorial>

<https://www.w3schools.com/angular/>

La promesa



A screenshot of a Facebook notifications feed. The header shows the user's profile picture and name 'Paola', along with navigation links for 'Home', 'Create', and social icons for groups, messages, and notifications. Below the header, there are four notification items:

- Ale Palacios posted in Cumpleaños 😊.  1d ago
- Ingenieros Itam posted in Comida de Ingenierías P2019.  20h ago
- Guilhem Grizaud, Sophia Muet and 3 other people recently reacted to a photo you are...  1d ago
- Gabriela Domenzain and 11 others have birthdays today. Wish them well!  6h ago