

INTRODUKTION TILL ANGULAR JS

DEL 1

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VAD ÄR ANGULAR?

Angular är ett JavaScript ramverk.

Angular används för utveckling av frontend-webbapplikationer.

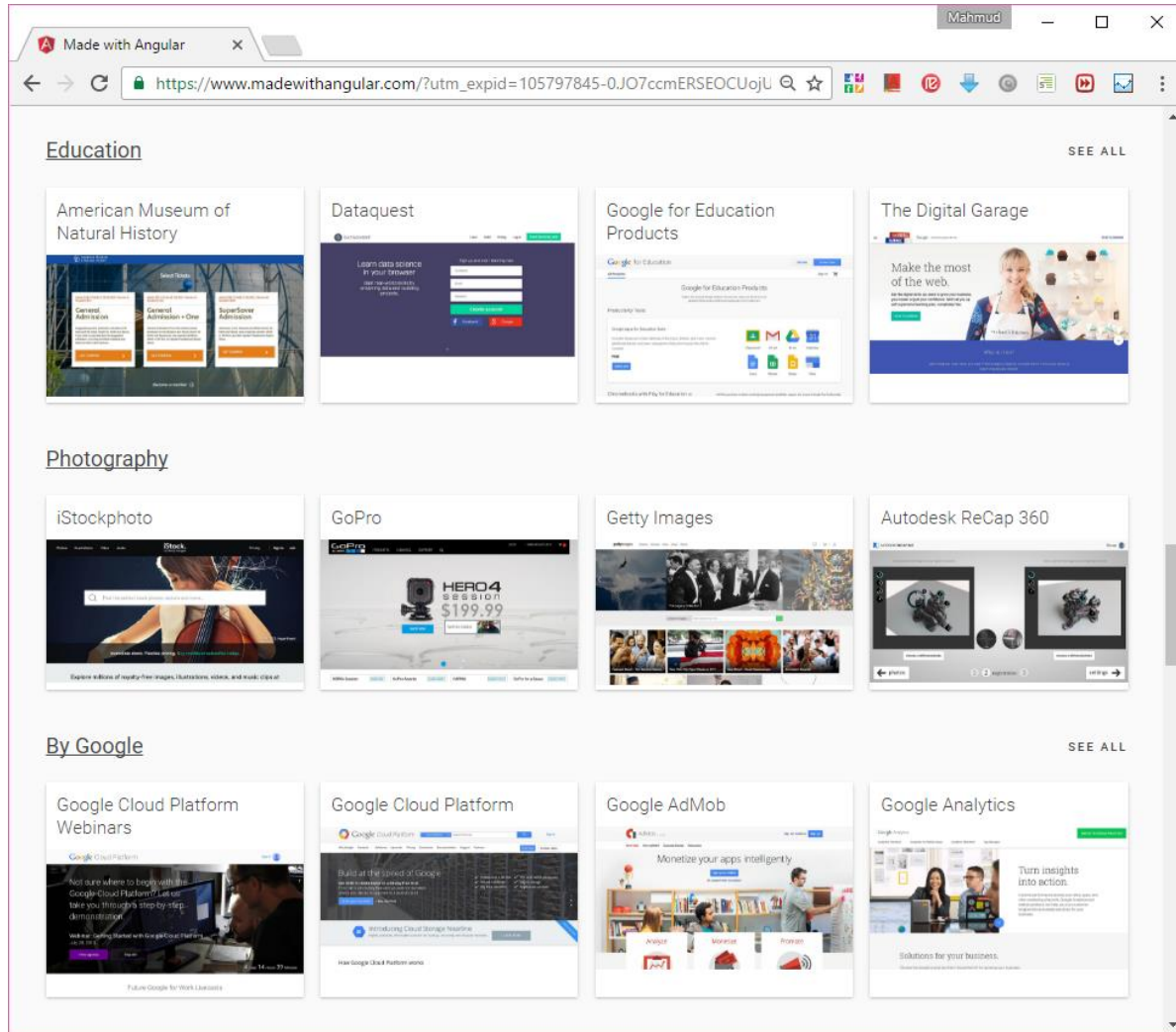
Angular används främst för att utveckla "Single Page Applications" s.k. SPA

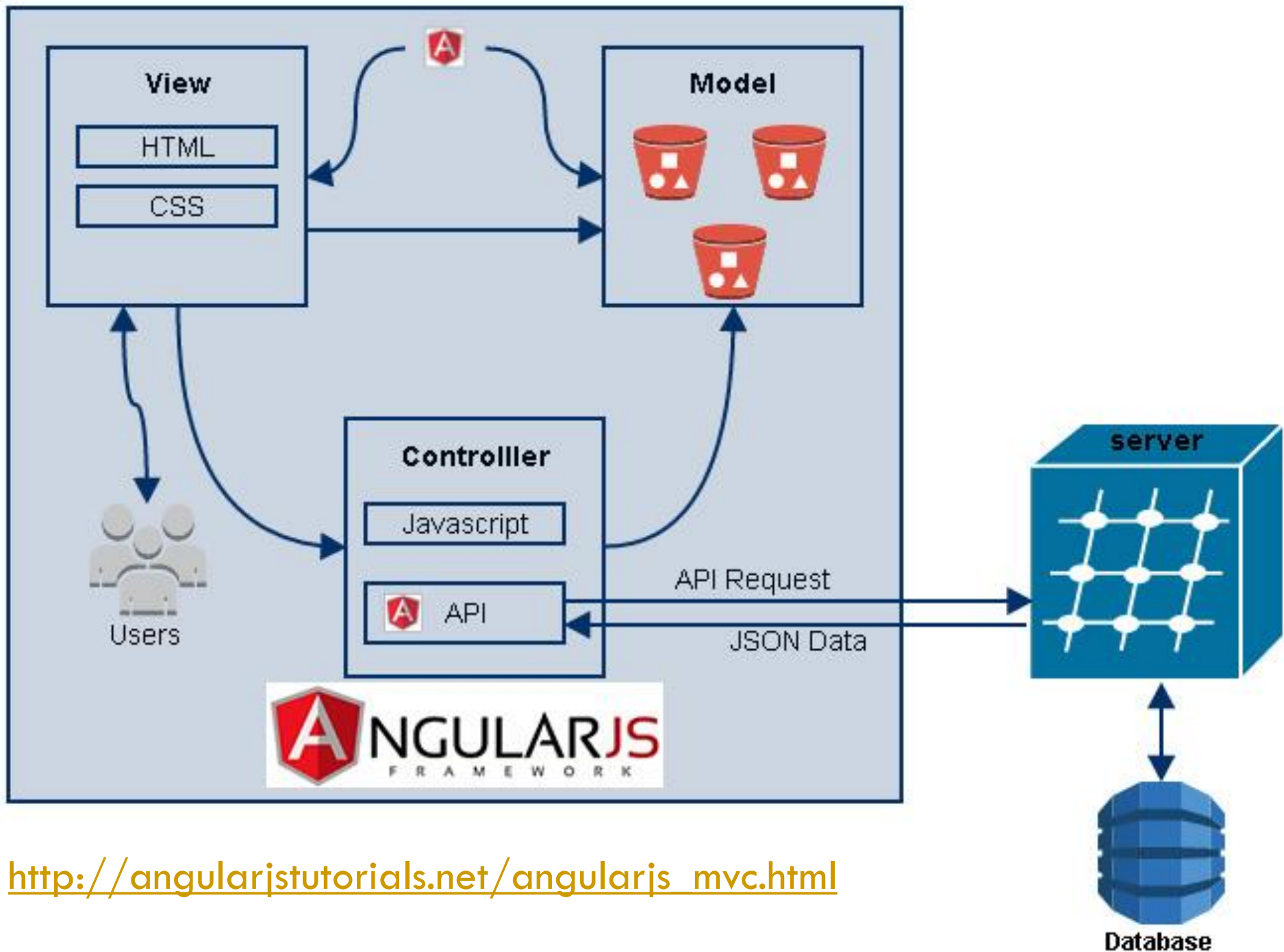
Angular är Open-Source och utvecklas av Google.



madewith ANGULAR

<https://www.madewithangular.com>





Bildkälla: http://angularjstutorials.net/angularjs_mvc.html

PLUNKER [HTTPS://PLNKR.CO/EDIT](https://plnkr.co/edit)

The screenshot displays the Plunker web editor interface. At the top, the browser address bar shows the URL <https://plnkr.co/edit/?p=catalogue>. The main interface includes a toolbar with buttons for 'Save', 'New', 'Run', and 'Sign in with Github'. On the left, a 'FILES' sidebar lists 'index.html', 'README.md', 'script.js', and 'style.css'. The central code editor shows HTML code for a simple page with a 'Hello' message. On the right, a dropdown menu is open, listing various package versions. The 'angularjs' package is selected, and its version '1.5.8' is highlighted in the dropdown. Other packages visible include 'angular-route', 'bootstrap-css', 'ui-bootstrap', and 'angularjs.1.4'.

FILES

- index.html
- README.md
- script.js
- style.css

PLUNK

Description:

Tags:

angularjs 2.0.0 1.5.8 1.5.7 More...

angular-route 1.5.8 1.4.8 1.4.6 M

bootstrap-css 4.0.0-alpha.4 4.0.0-alpha.3 4.0.0-alpha.2 More...

ui-bootstrap 2.2.0 2.1.3 2.0.1 Mo

angularjs.1.4 1.4.7 1.4.0

2.0.0-alpha.27

2.0.0-alpha.26

2.0.0-alpha.25

2.0.0-alpha.24

2.0.0-alpha.23

2.0.0-alpha.22

2.0.0-alpha.20

2.0.0-alpha.19

1.5.8

1.5.7

1.5.6

1.5.5

ANGULAR DIRECTIVES

Angular lägger till nya attribut på HTML-element genom olika direktiv.

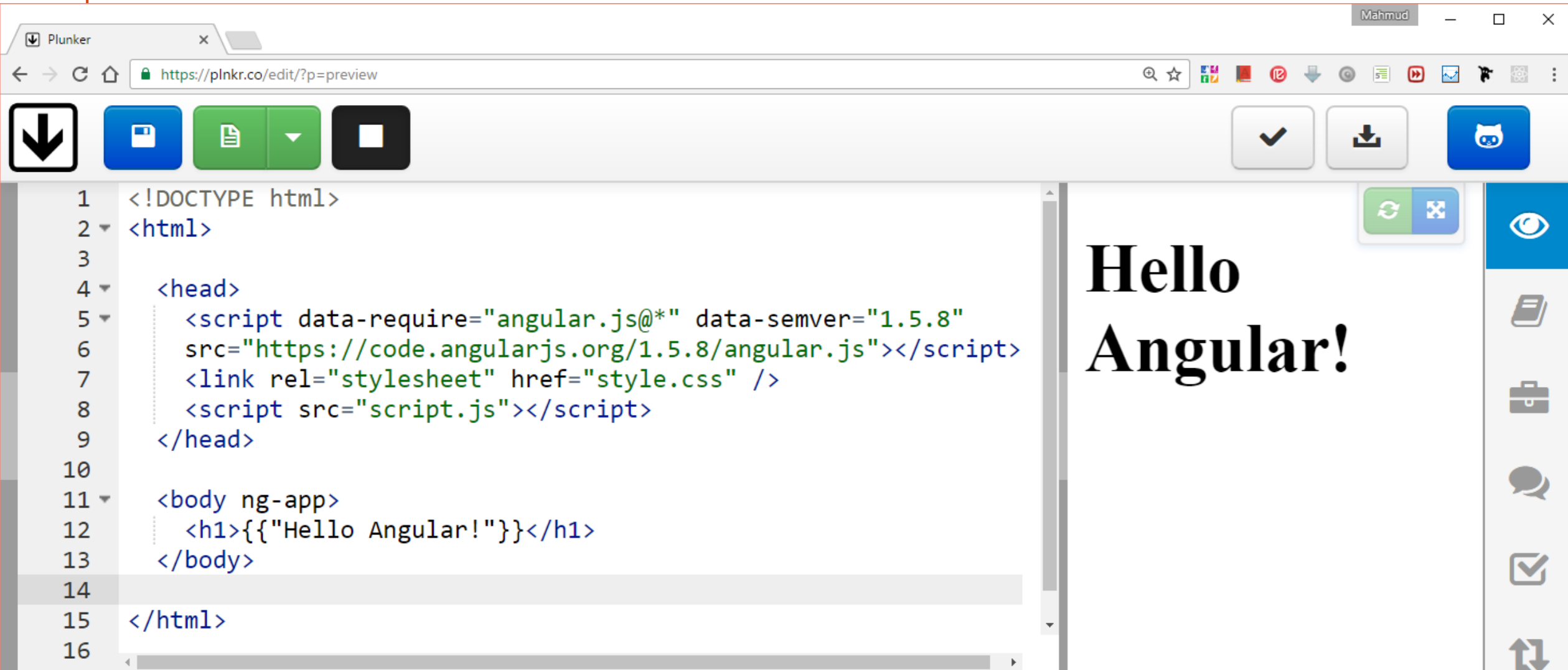
Det finns ett antal inbyggda direktiv i Angular.

Vi kan även skapa våra egna direktiv.

Exempel:

- **ng-app** Initierar en Angular applikation.
- **ng-model** Definierar den modell vi vill binda till ett HTML-element.
- **ng-init** Initierar en variabel eller ett objekt.

HELLO ANGULAR



The image shows a web browser window with the Plunker editor. The address bar shows the URL <https://plnkr.co/edit/?p=preview>. The editor interface includes a toolbar with icons for download, save, edit, and preview. The code editor on the left contains the following HTML code:

```
1 <!DOCTYPE html>
2 <html>
3
4   <head>
5     <script data-require="angular.js@*" data-semver="1.5.8"
6       src="https://code.angularjs.org/1.5.8/angular.js"></script>
7     <link rel="stylesheet" href="style.css" />
8     <script src="script.js"></script>
9   </head>
10
11  <body ng-app>
12    <h1>{{"Hello Angular!"}}</h1>
13  </body>
14
15 </html>
16
```

The preview window on the right displays the rendered output: **Hello Angular!**

HELLO MAHMUD!

The image shows a web browser window with a Plunker editor. The address bar shows the URL `https://plnkr.co/edit/?p=preview`. The editor interface includes a toolbar with icons for download, save, edit, and run. The code editor on the left contains the following HTML and JavaScript code:

```
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <script data-require="angular.js@*" data-semver="1.5.8"
6     src="https://code.angularjs.org/1.5.8/angular.js"></script>
7   <link rel="stylesheet" href="style.css" />
8   <script src="script.js"></script>
9 </head>
10
11 <body ng-app>
12   <input ng-model="name">
13   <h1>Hello {{name}}</h1>
14 </body>
15
16
```

The preview window on the right shows the rendered application. It features an input field with the text "Mahmud!" and a large heading "Hello Mahmud!" below it. The preview window also includes a refresh button and a visibility toggle.

LADDA NER ANGULAR FRÅN [HTTPS://ANGULARJS.ORG](https://angularjs.org)

HTML enhanced for web apps!

 Download AngularJS 1



(1.5.8 / 1.2.30)

Try the new Angular 2



 View on GitHub

 Design Docs & Notes

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8" />
  <title>Angular - Grundmall</title>
  <script src="angular.min.js"></script>
</head>
<body ng-app>
  <div>
    <p>Namn : <input type="text" ng-model="name"></p>
    <h1>Hej {{name}}</h1>
  </div>
</body>
</html>
```

ANGULAR EXPRESSIONS

```
<body ng-app>
  <div ng-init="myColor='#FFF'">
    <input style="background-color:{{myColor}}"
      ng-model="myColor"
      value="{{myColor}}">
  </div>
</body>
```

ANGULAR EXPRESSIONS — EXEMPEL 2

```
<body ng-app>  
  <div ng-init="moms=0.25">  
    <p>Pris exkl. moms:100</p>  
    <p>Pris inkl. moms: {{ 100 * (1 + moms) }}</p>  
  </div>  
</body>
```

ANGULAR EXPRESSIONS — EXEMPEL 3

```
<div ng-init="person={firstName: 'John', lastName: 'Doe'}">  
  <h1>{{person.firstName}}</h1>  
  <h2 ng-bind="person.lastName"></h2>  
  <p>OBS! ng-bind binder data till ett element.  
    ng-bind används istället för dubbla klamrar.  
  </p>  
</div>
```

ANGULAR MODULES

En Angular-modul är en behållare (container) för de olika delarna i en applikation.

Vi kan definiera kontroller (controllers) och tjänster (services) i en Angular-modul.

En Angular-modul skapas med funktionen `angular.module`

```
<script>
```

```
var app = angular.module("myApp", []);
```

```
</script>
```

ANGULAR CONTROLLERS

Angular applikationer kontrolleras med hjälp av "Controllers".

En Controller är ansvarig för att vara logiken mellan View (DOM) och Modell.

En Controller måste skapas inuti en modul.

```
<script>
```

```
var app = angular.module("myApp", []);  
app.controller("myCtrl", function($scope) {  
    $scope.firstName = "John";  
    $scope.lastName = "Doe";  
});
```

```
</script>
```

ANGULAR CONTROLLERS — EXEMPEL 1

```
<body ng-app="myApp">
<script>
  var app = angular.module("myApp", []);
  app.controller("myCtrl", function() {
    this.firstName = "John";
    this.lastName = "Doe";
  });
</script>
<h1 ng-controller="myCtrl as c">
  {{ c.firstName + " " + c.lastName }}
</h1>
```

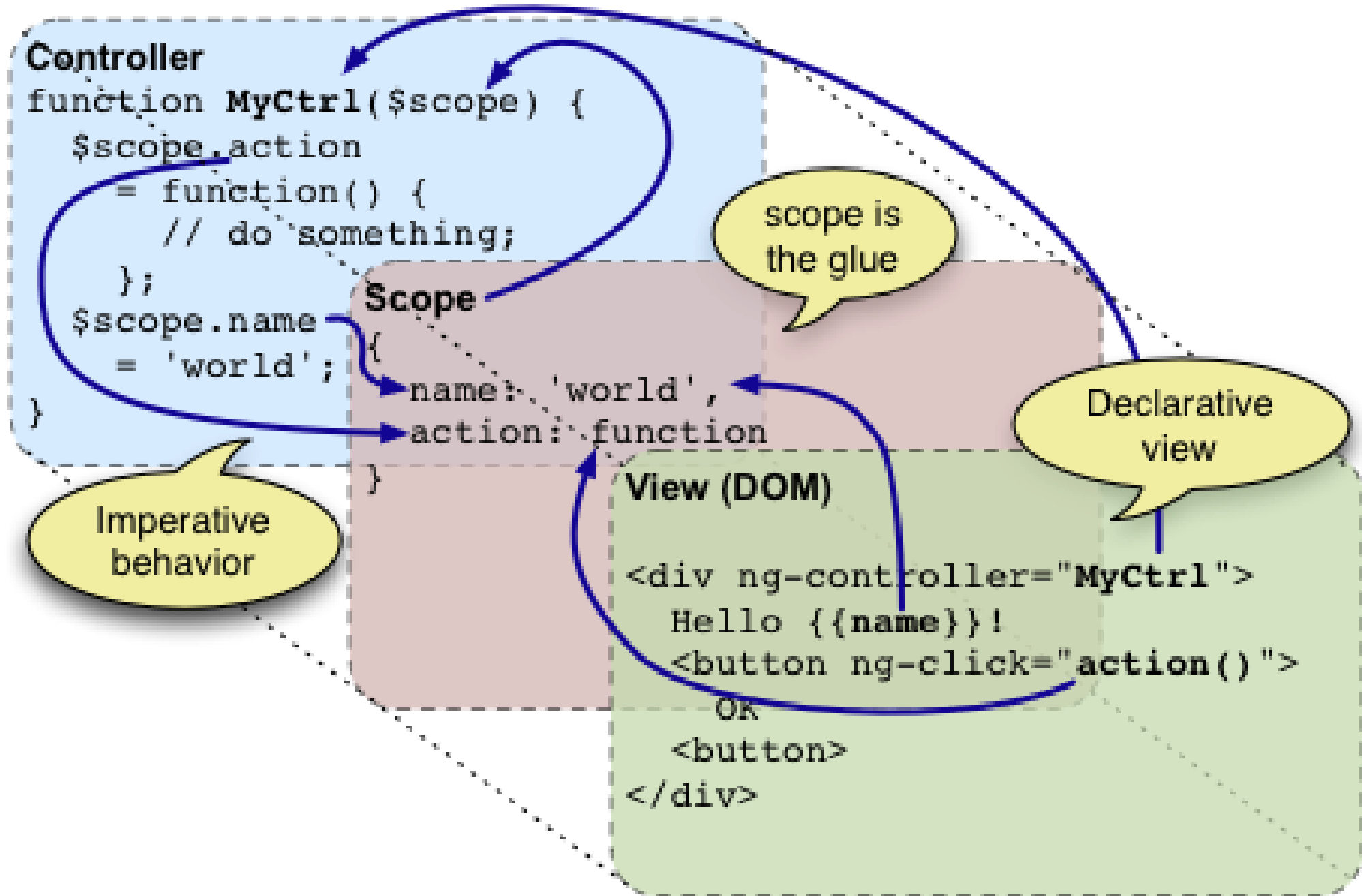

ANGULAR CONTROLLERS — \$SCOPE

```
<script>
  var app = angular.module("myApp", []);
  app.controller("myCtrl", function ($scope) {
    $scope.firstName = "John";
    $scope.lastName = "Doe";
  });
</script>
<h1 ng-controller="myCtrl">
  {{ firstName + " " + lastName }}
</h1>
```

Scope is the glue between application controller and the view *

*

<https://docs.angularjs.org/guide/scope>



Bildkälla:

<http://devgirl.org/2013/03/21/fun-with-angularjs/>

ANGULAR CONTROLLERS — EXEMPEL 2

```
<div ng-controller="personCtrl">  
  First Name: <input type="text" ng-model="firstName"><br>  
  Last Name:  <input type="text" ng-model="lastName"> <br>  
  Full Name:  {{ fullName() }}  
</div>
```

```
<script> var app = angular.module('myApp', []);  
  app.controller('personCtrl', function($scope) {  
    $scope.firstName = "";  
    $scope.lastName  = "";  
    $scope.fullName = function() {  
      return $scope.firstName + " " + $scope.lastName;  
    };  
  });  
</script>
```



Flytta till en extern fil

SKAPA EN NY DIREKTIV — EXEMPEL 1

```
<script>
app.directive("nyDirektiv", function () {
    return {
        template: "Jag har skapats med en direktiv!"
    };
});
</script>
<body ng-app="myApp">
<h1 ny-direktiv></h1>
```

SKAPA EN NY DIREKTIV — EXEMPEL 2

```
<script>
app.directive("nyDirektiv", function () {
    return {
        template: "<h1>Jag har skapats med en direktiv!</h1>"
    };
});
</script>
<body ng-app="myApp">
<ny-direktiv></ny-direktiv>
```

SKAPA EN NY DIREKTIV — EXEMPEL 3

```
<script>
app.directive("nyDirektiv", function () {
  return {
    restrict: "M",
    replace: true,
    template: "<h1>Jag har skapats med en ny direktiv!</h1>"
  };
});
</script>
<body ng-app="myApp">
<!-- directive: ny-direktiv -->
```

restrict:

E Element name

A Attribute

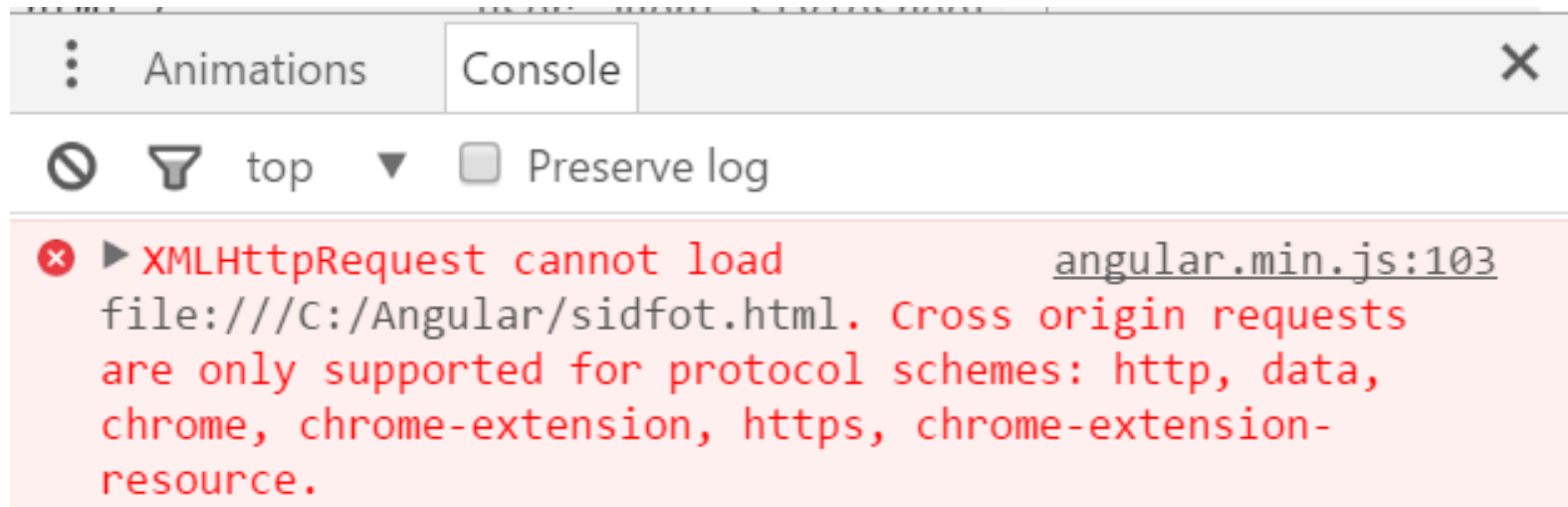
C Class

M Comment

• Default value EA

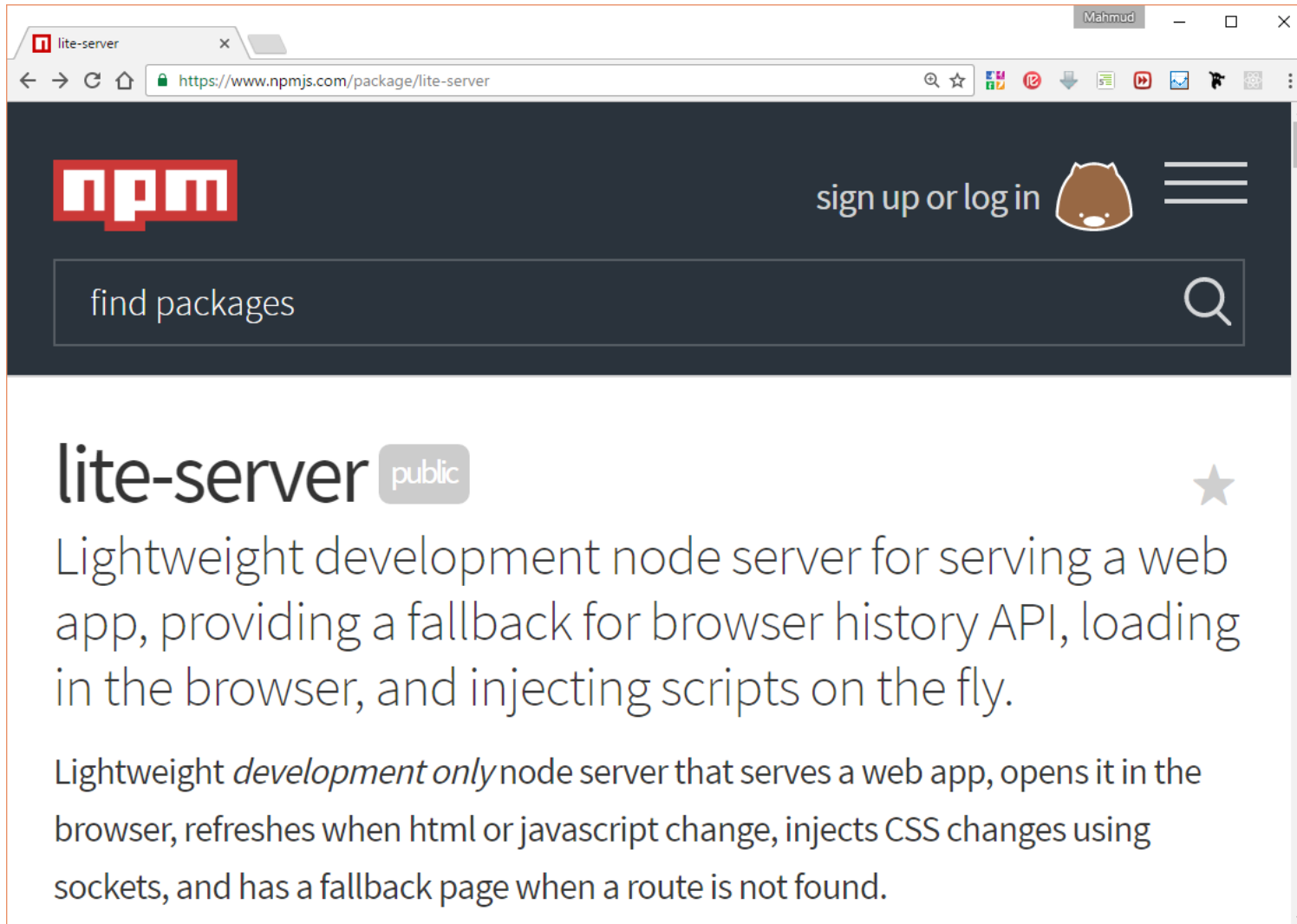
SKAPA EN NY DIREKTIV — EXEMPEL 4

```
<script>
app.directive("sidfot", function () {
  return {
    templateUrl: "sidfot.html"
  };
});
</script>
<body ng-app="myApp">
<sidfot></sidfot>
</body>
```



LITE-SERVER

[HTTPS://WWW.NPMJS.COM/PACKAGE/LITE-SERVER](https://www.npmjs.com/package/lite-server)



The screenshot shows a web browser window with the URL <https://www.npmjs.com/package/lite-server>. The page features the npm logo, a search bar with the text "find packages", and a navigation menu. The main content area displays the package name "lite-server" with a "public" badge and a star icon. Below the name is a description: "Lightweight development node server for serving a web app, providing a fallback for browser history API, loading in the browser, and injecting scripts on the fly." A second paragraph provides more details: "Lightweight *development only* node server that serves a web app, opens it in the browser, refreshes when html or javascript change, injects CSS changes using sockets, and has a fallback page when a route is not found."

lite-server public ★

Lightweight development node server for serving a web app, providing a fallback for browser history API, loading in the browser, and injecting scripts on the fly.

Lightweight *development only* node server that serves a web app, opens it in the browser, refreshes when html or javascript change, injects CSS changes using sockets, and has a fallback page when a route is not found.

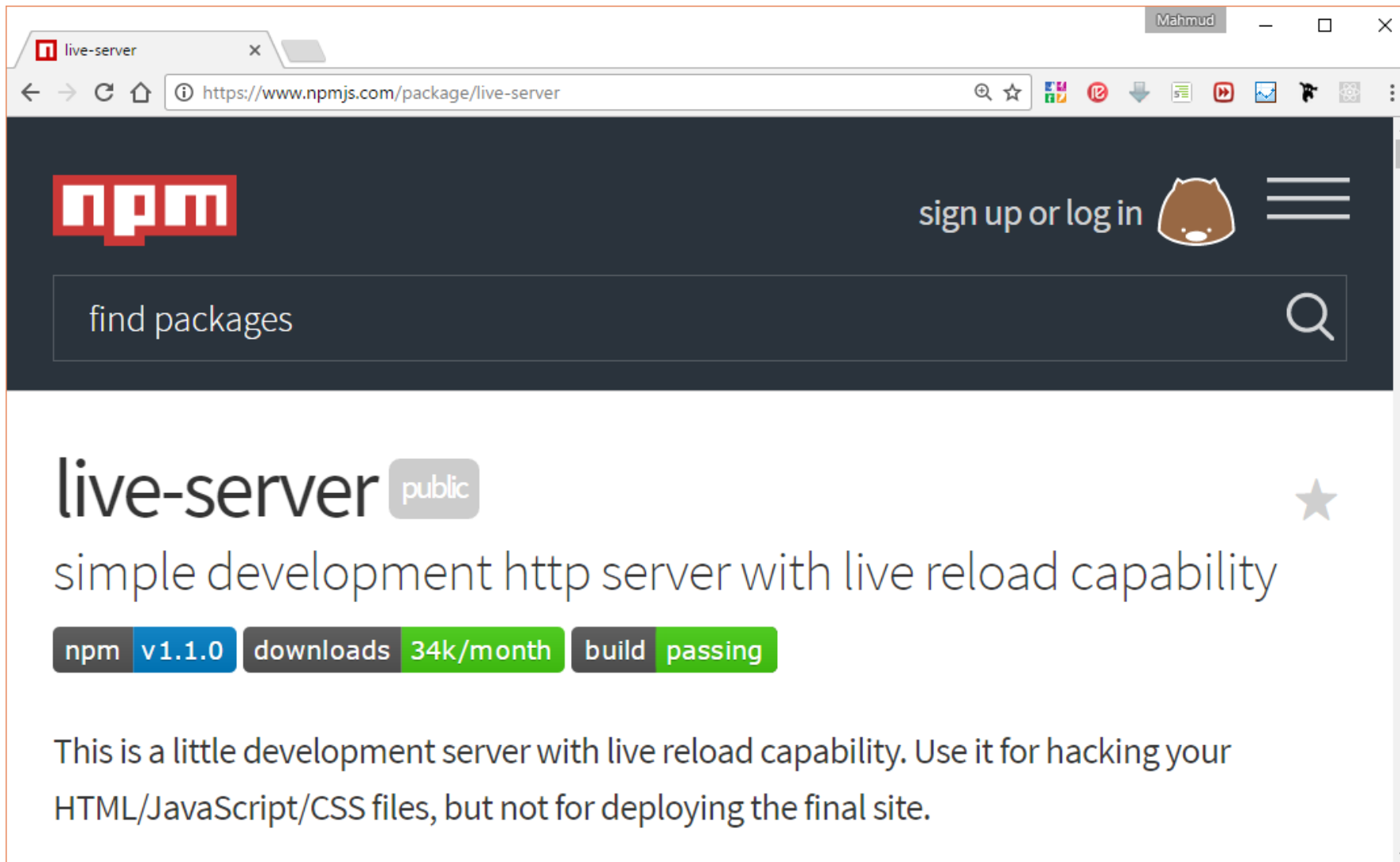
INSTALLERA LITE-SERVER

1. Installera NodeJS
2. Skapa en ny inställningsfil (package.json)

```
{  
  "scripts": {  
    "dev": "lite-server"  
  }  
}
```

3. Kör detta kommando i CMD (OBS! Inne i projektmappen)
`npm install lite-server --save-dev`
4. Kör servern med detta kommando
`npm run dev`

TIPS! TESTA LIVE-SERVER



The screenshot shows a web browser window with the URL `https://www.npmjs.com/package/live-server`. The page features the npm logo, a search bar with the text "find packages", and a navigation menu with "sign up or log in" and a user profile icon. The main content area displays the package name "live-server" with a "public" badge, a description "simple development http server with live reload capability", and a row of status badges: "npm v1.1.0", "downloads 34k/month", and "build passing". Below this, a paragraph of text reads: "This is a little development server with live reload capability. Use it for hacking your HTML/JavaScript/CSS files, but not for deploying the final site."

live-server public

simple development http server with live reload capability

npm v1.1.0 downloads 34k/month build passing

This is a little development server with live reload capability. Use it for hacking your HTML/JavaScript/CSS files, but not for deploying the final site.

HANTERA FÄLT (ARRAY) MED NG-REPEAT

```
<div ng-init="months=['Jan','Feb','Mar']">
```

```
  <div ng-repeat="x in months">
```

```
    {{ x }}
```

```
  </div>
```

```
</div>
```

ÖVNINGAR

1. Skapa en kontroller som har en lista (array) över ett antal objekt. Objekten innehåller egenskaperna *namn* och *land*
2. Visa namn och land i en HTML-Lista (UL)
3. Visa namn och land i en HTML-tabell

ANGULAR FILTERS

Angular har filter som möjliggör formatering av data.

Använd pipe-tecknet (vertikalstreck |) för att skicka data till ett filter.

```
<div ng-app="myApp" ng-controller="personCtrl">
  <p>The name is {{ lastName | uppercase }}</p>
</div>
<script>
angular.module('myApp', []).controller('personCtrl', function($scope) {
    $scope.firstName = "John",
    $scope.lastName = "Doe"
});
</script>
```

ANGULAR FILTERS — EXEMPEL 2

Sök efter namn
som innehåller M

```
<div ng-app="myApp" ng-controller="namesCtrl">
  <ul><li ng-repeat="x in names | filter : 'M'">
    {{ x }}
  </li></ul>
</div>
<script>
angular.module('myApp', []).controller('namesCtrl', function($scope) {
  $scope.names = ['Jani', 'Carl', 'Margareth', 'Hege', 'Joe',
    'Gustav', 'Birgit', 'Mary', 'Kai' ];
});
</script>
```

ANGULAR FILTERS – ÖVNINGAR

1. Skapa en kontroller som har en enkel lista (array) över några namn.
2. Visa namnen i en HTML-lista (UL) (eller tabell)
3. Skapa ett textfält ovanför listan
4. Binda textfältet till listan.

Man ska kunna filtrera listan genom att skriva en eller flera bokstäver i textfältet.

Filter via input

M|

- Margareth
- Mary

ANGULAR FILTERS — EXEMPEL 3

Sortera efter
länder

```
<div ng-app="myApp" ng-controller="namesCtrl">
<ul><li ng-repeat="x in names | orderBy:'country'">
    {{ x.name + ', ' + x.country }}
</li></ul>
</div>
<script>
angular.module('myApp', []).controller('namesCtrl', function($scope)
{
    $scope.names = [ {name: 'Jani', country: 'Norway'},
        {name: 'Carl', country: 'Sweden'},
        {name: 'Margareth', country: 'England'} ];
});
</script>
```


ANGULAR EVENTS — NG-CLICK

```
<div ng-app="myApp" ng-controller="myCtrl">
  <button ng-click="count = count + 1">Klicka här!</button>
<p>{{ count }}</p>
</div>
<script>
  var app = angular.module('myApp', []);
  app.controller('myCtrl', function($scope) {
    $scope.count = 0;
  });
</script>
```

ANGULAR EVENTS — NG-SHOW

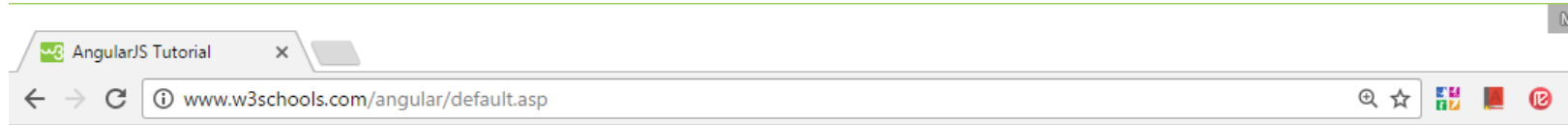
```
<div ng-app="myApp" ng-controller="myCtrl">
  <button ng-click="myFunc()">Visa/Dölj</button>
    <div ng-show="showMe"><h1>Mer info...</h1></div>
</div>
<script>
var app = angular.module('myApp', []);
app.controller('myCtrl', function($scope) {
  $scope.showMe = false;
  $scope.myFunc = function() {
    $scope.showMe = !$scope.showMe;
  }
});
</script>
```

ÖVNINGAR

1. Skapa en kontroller som har en enkel lista över ett antal produkter
2. Produkterna har egenskaperna: ID, Namn, Pris
3. Visa listan i en HTML-Tabell
4. Lägg till en rad med rubrikerna ID, Namn och Pris (se bilden)
5. Man ska kunna sortera listan genom att klicka på kolumnrubrikerna.

ID	Namn	Pris
01	PC	8000
02	Mac	9900
03	iPad Air	4500
04	Samsung S7	6900

LÄS [HTTP://WWW.W3SCHOOLS.COM/ANGULAR](http://www.w3schools.com/angular)



w3schools.com

THE WORLD'S LARGEST WEB DEVELOPERS

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Tutorial

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Angular Intro

Angular Expressions

Angular Modules

Angular Directives

Angular Model

Angular Data Binding

Angular Controllers

Angular Scopes

Angular Filters

Angular Services

Angular Http

Angular Tables

Angular Select

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AngularJS extends HTML with new attributes.

AngularJS is perfect for Single Page Applications (SPAs).

AngularJS is easy to learn.

Learn AngularJS now!