



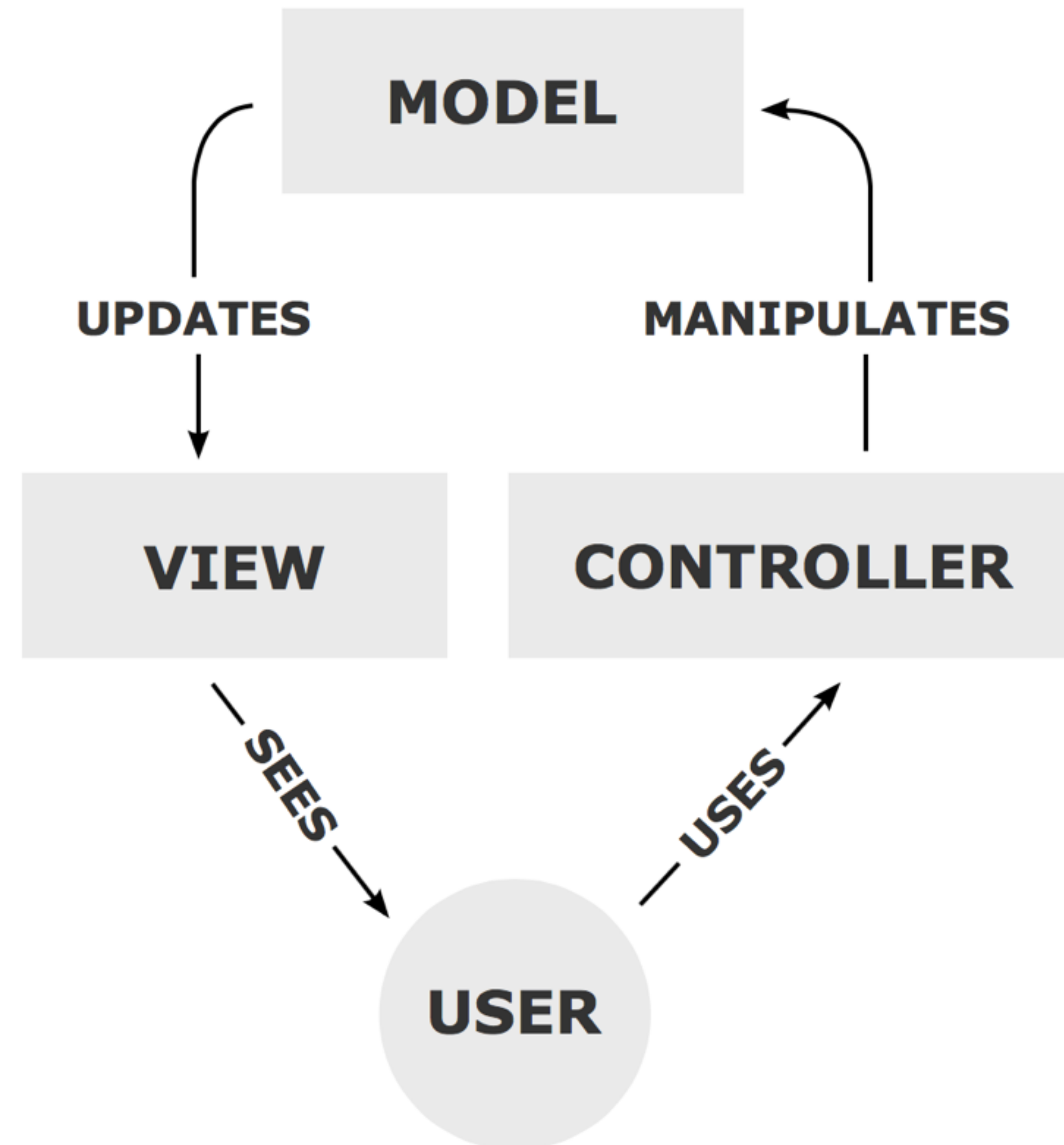
# Angular JS

Ruven Sprenger  
Adaptive Interfaces WS 14/15

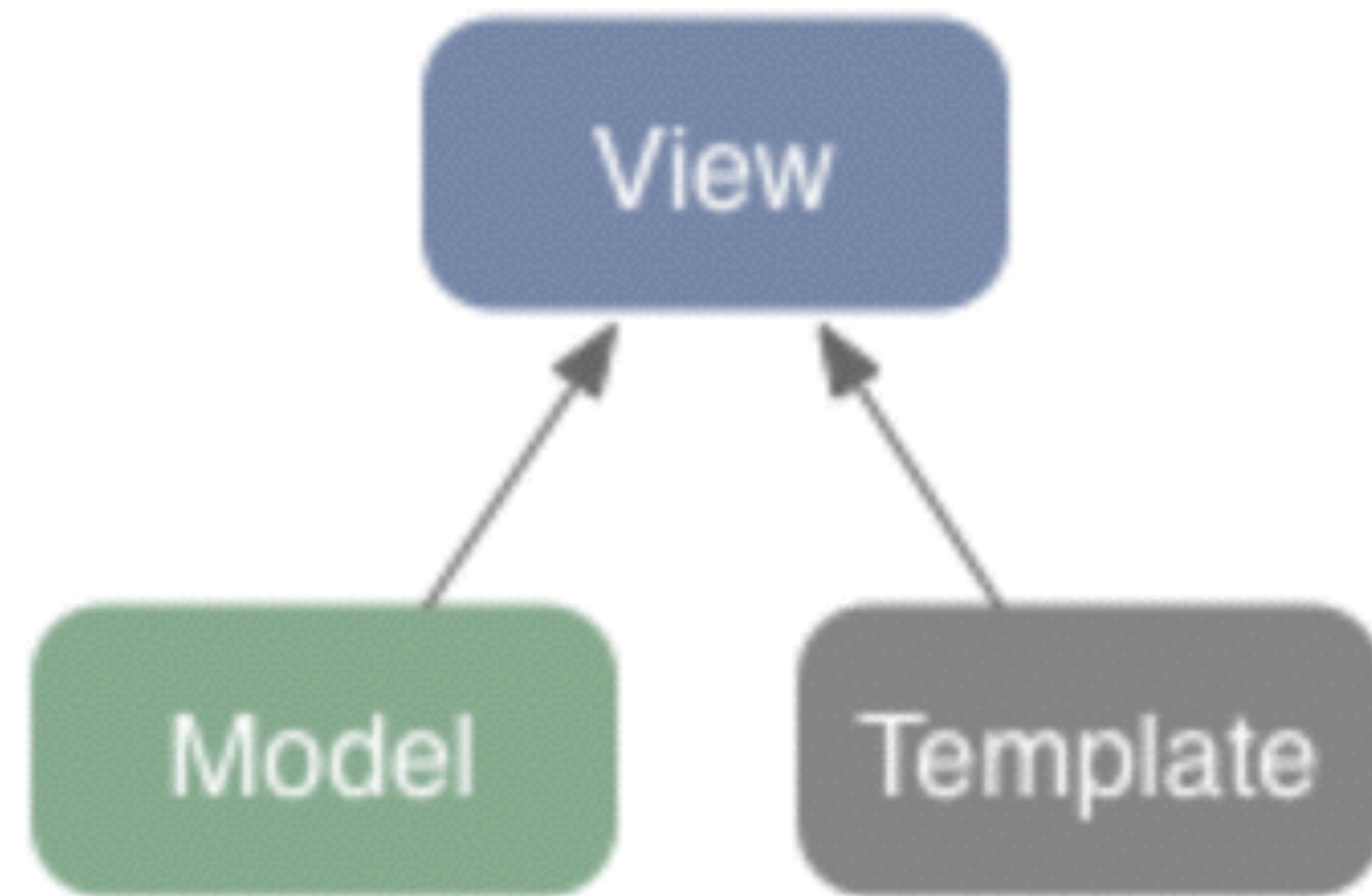
# About Angular

- Java Script Framework
- Entwickelt von Google seit 2009
- Open Source
- geeignet für Prototypen
- MVC-Model / bidirektionale Datenbindung

# MVC-Model

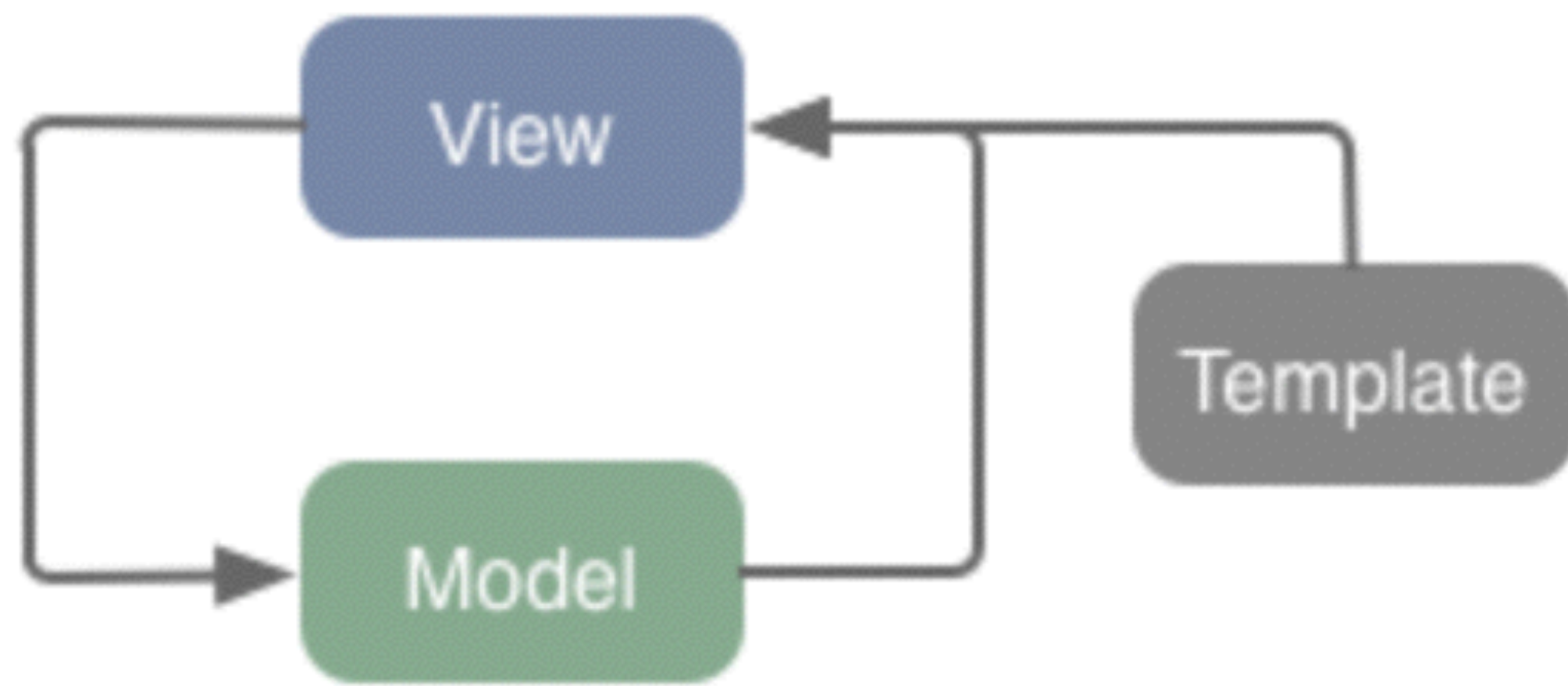


# Einfach Datenbindung



- klassische Webentwicklung
- Model stellt Daten bereit
- Template liefert Aussehen
- Änderungen am Model werden nicht automatisch an View geschickt
- Entwickler muss für Sync. sorgen

# Bidirektionale Datenbindung



- Verknüpfung zwischen Elementen in Model und View
- Template steht bereit um Elemente hinzuzufügen/ zu löschen/ zu ändern
- Änderungen werden an View übergeben
- manuelle Sync. entfällt

# ng-app

```
<div ng-app="">
```

```
</div>
```



# ng-model

```
<div ng-app="">  
  <input type="text" ng-model="data.message">  
  <h1>{{data.message + " world"}}</h1>  
</div>
```

# \$scope

- Vermittlungsschicht zwischen View und Controller
- Variablen werden dynamisch erzeugt

```
<div ng-app="">
  <input type="text" ng-model="data.message">
  <h1>{{data.message}} + " world"</h1>
</div>
```



# ng-controller

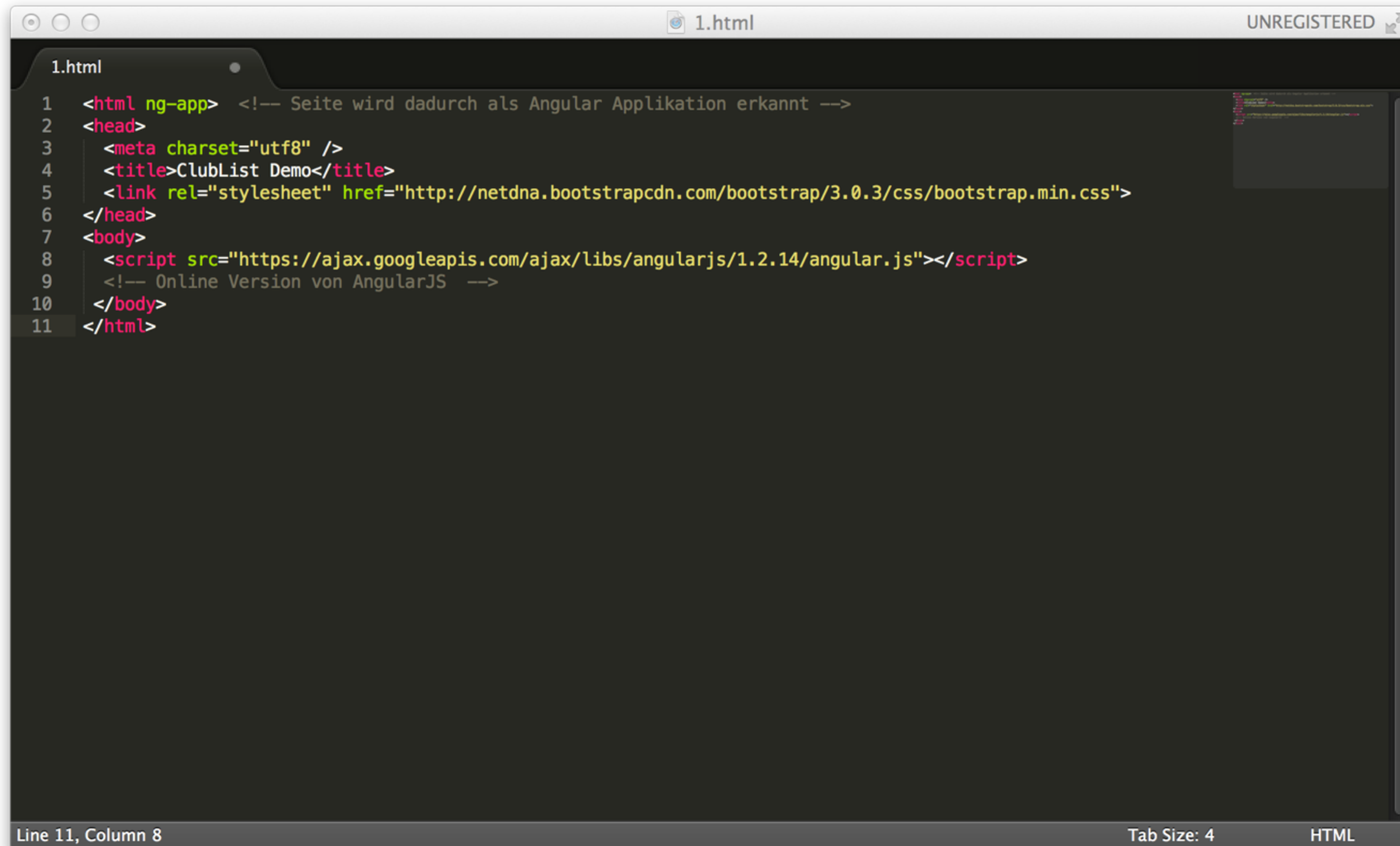
```
function MainController($scope) {  
    $scope.name = 'AngularJS';  
}
```

# noch mehr direktiven...

- `ngClick`
- `ngDbClick`
- `ngMouseup`
- `ngMousedown`
- `ngMouseover`
- `ngMousemove`

Praxis

# Praxis

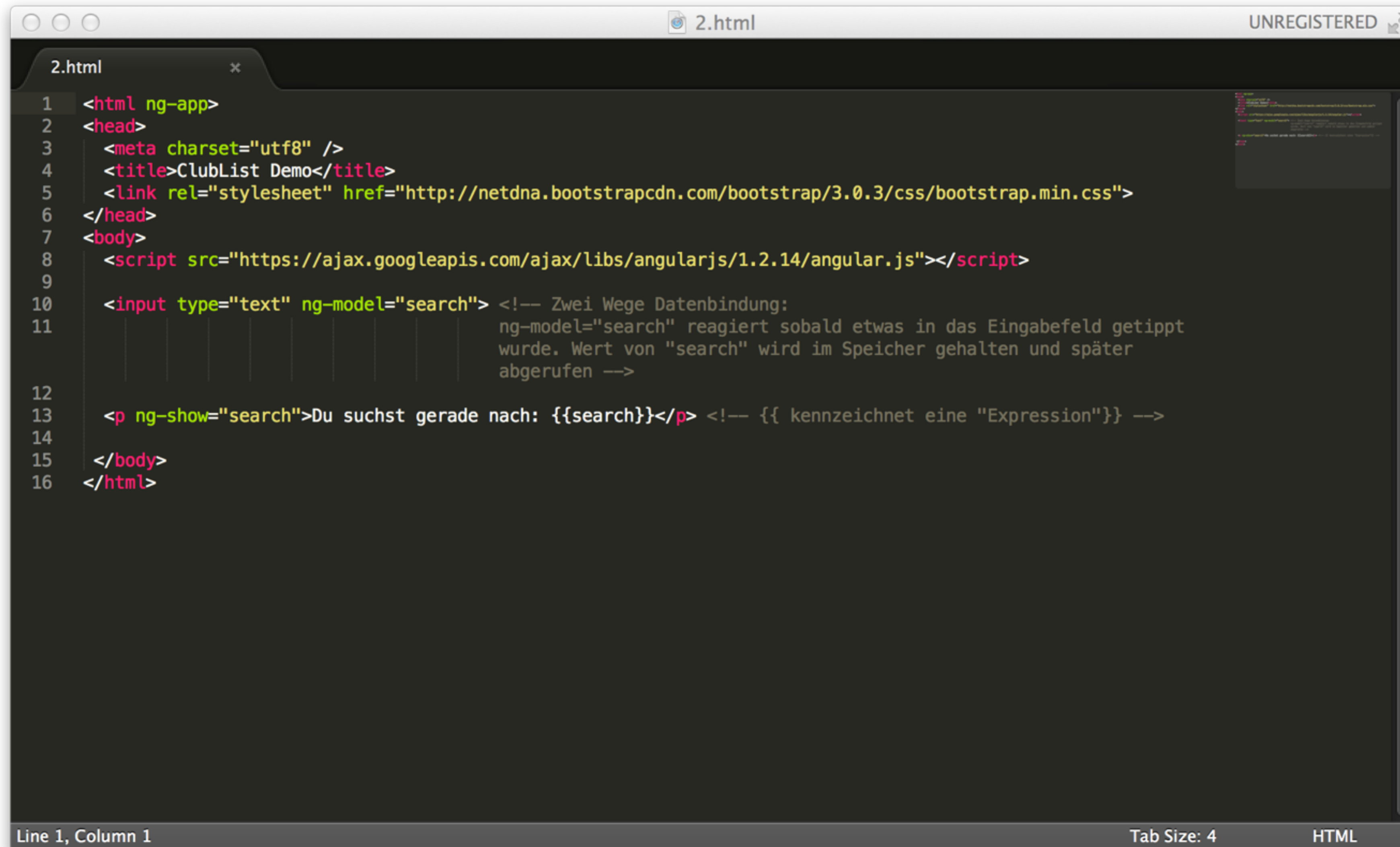


```
1 <html ng-app> <!-- Seite wird dadurch als Angular Applikation erkannt -->
2 <head>
3   <meta charset="utf8" />
4   <title>ClubList Demo</title>
5   <link rel="stylesheet" href="http://netdna.bootstrapcdn.com/bootstrap/3.0.3/css/bootstrap.min.css">
6 </head>
7 <body>
8   <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.2.14/angular.js"></script>
9   <!-- Online Version von AngularJS -->
10 </body>
11 </html>
```

Line 11, Column 8      Tab Size: 4      HTML



# Praxis



```
1 <html ng-app>
2 <head>
3   <meta charset="utf8" />
4   <title>ClubList Demo</title>
5   <link rel="stylesheet" href="http://netdna.bootstrapcdn.com/bootstrap/3.0.3/css/bootstrap.min.css">
6 </head>
7 <body>
8   <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.2.14/angular.js"></script>
9
10  <input type="text" ng-model="search"> <!-- Zwei Wege Datenbindung:
11      ng-model="search" reagiert sobald etwas in das Eingabefeld getippt
      wurde. Wert von "search" wird im Speicher gehalten und später
      abgerufen -->
12
13  <p ng-show="search">Du suchst gerade nach: {{search}}</p> <!-- {{ kennzeichnet eine "Expression" }} -->
14
15 </body>
16 </html>
```

Line 1, Column 1

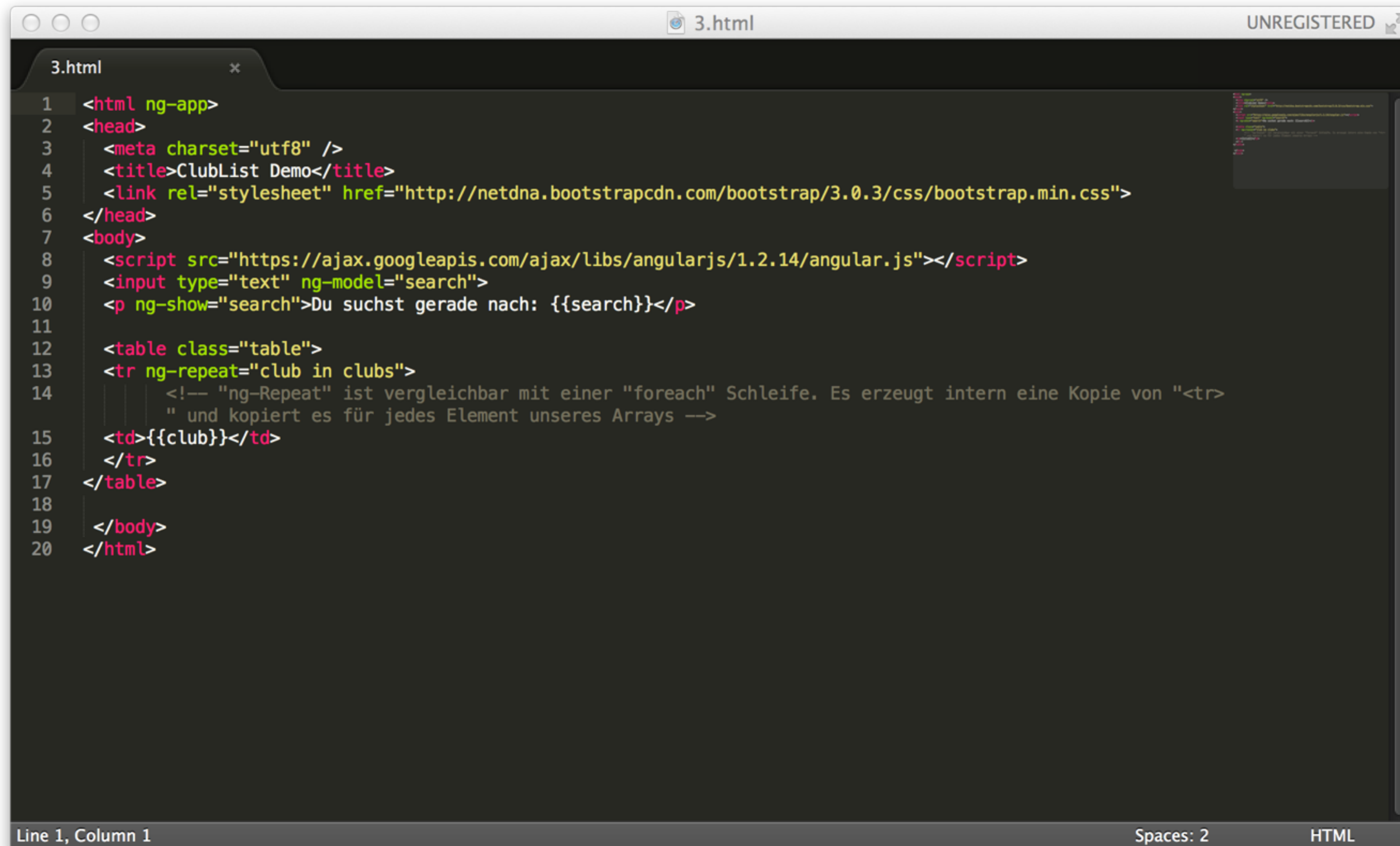
Tab Size: 4

HTML

# DEMO



# Praxis



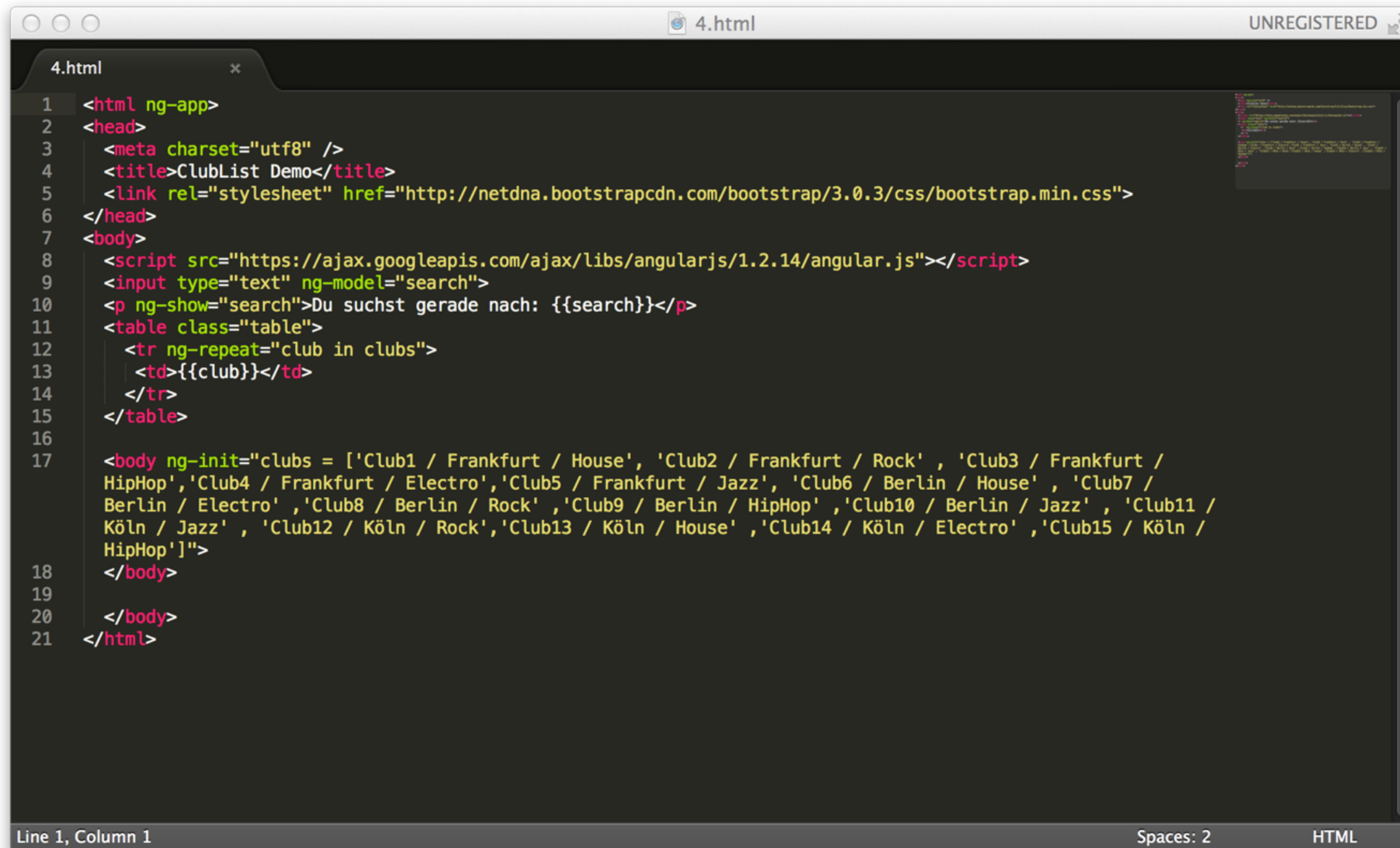
```
1 <html ng-app>
2 <head>
3   <meta charset="utf8" />
4   <title>ClubList Demo</title>
5   <link rel="stylesheet" href="http://netdna.bootstrapcdn.com/bootstrap/3.0.3/css/bootstrap.min.css">
6 </head>
7 <body>
8   <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.2.14/angular.js"></script>
9   <input type="text" ng-model="search">
10  <p ng-show="search">Du suchst gerade nach: {{search}}</p>
11
12  <table class="table">
13    <tr ng-repeat="club in clubs">
14      <!-- "ng-Repeat" ist vergleichbar mit einer "foreach" Schleife. Es erzeugt intern eine Kopie von "<tr>"
15         " und kopiert es für jedes Element unseres Arrays -->
16      <td>{{club}}</td>
17    </tr>
18  </table>
19 </body>
20 </html>
```

Line 1, Column 1

Spaces: 2

HTML

# Praxis



The screenshot shows a code editor window titled '4.html' with a tab labeled '4.html'. The editor contains HTML code for an AngularJS application. The code includes a search input, a table of clubs, and an AngularJS initialization script. The status bar at the bottom indicates 'Line 1, Column 1', 'Spaces: 2', and 'HTML'.

```
1 <html ng-app>
2 <head>
3   <meta charset="utf8" />
4   <title>ClubList Demo</title>
5   <link rel="stylesheet" href="http://netdna.bootstrapcdn.com/bootstrap/3.0.3/css/bootstrap.min.css">
6 </head>
7 <body>
8   <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.2.14/angular.js"></script>
9   <input type="text" ng-model="search">
10  <p ng-show="search">Du suchst gerade nach: {{search}}</p>
11  <table class="table">
12    <tr ng-repeat="club in clubs">
13      <td>{{club}}</td>
14    </tr>
15  </table>
16
17  <body ng-init="clubs = ['Club1 / Frankfurt / House', 'Club2 / Frankfurt / Rock' , 'Club3 / Frankfurt /
HipHop','Club4 / Frankfurt / Electro','Club5 / Frankfurt / Jazz', 'Club6 / Berlin / House' , 'Club7 /
Berlin / Electro' , 'Club8 / Berlin / Rock' , 'Club9 / Berlin / HipHop' , 'Club10 / Berlin / Jazz' , 'Club11 /
Köln / Jazz' , 'Club12 / Köln / Rock','Club13 / Köln / House' , 'Club14 / Köln / Electro' , 'Club15 / Köln /
HipHop']">
18  </body>
19
20  </body>
21 </html>
```

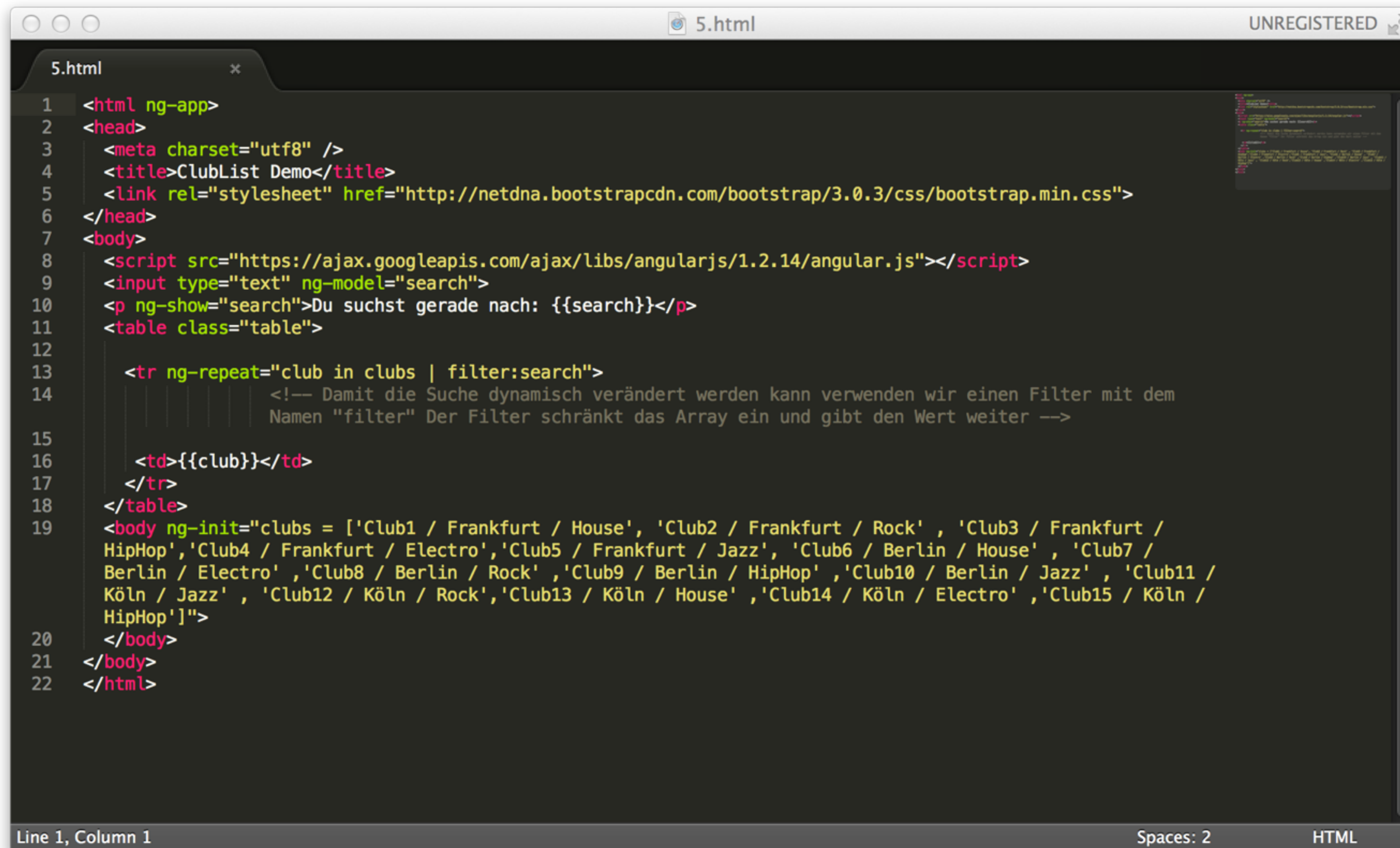
Line 1, Column 1

Spaces: 2

HTML



# Praxis



The screenshot shows a code editor window titled "5.html" with a tab labeled "5.html". The editor contains the following HTML code:

```
1 <html ng-app>
2 <head>
3   <meta charset="utf8" />
4   <title>ClubList Demo</title>
5   <link rel="stylesheet" href="http://netdna.bootstrapcdn.com/bootstrap/3.0.3/css/bootstrap.min.css">
6 </head>
7 <body>
8   <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.2.14/angular.js"></script>
9   <input type="text" ng-model="search">
10  <p ng-show="search">Du suchst gerade nach: {{search}}</p>
11  <table class="table">
12
13    <tr ng-repeat="club in clubs | filter:search">
14      <td>{{club}}</td>
15    </tr>
16  </table>
17  <body ng-init="clubs = ['Club1 / Frankfurt / House', 'Club2 / Frankfurt / Rock', 'Club3 / Frankfurt /
18  HipHop', 'Club4 / Frankfurt / Electro', 'Club5 / Frankfurt / Jazz', 'Club6 / Berlin / House', 'Club7 /
19  Berlin / Electro', 'Club8 / Berlin / Rock', 'Club9 / Berlin / HipHop', 'Club10 / Berlin / Jazz', 'Club11 /
20  Köln / Jazz', 'Club12 / Köln / Rock', 'Club13 / Köln / House', 'Club14 / Köln / Electro', 'Club15 / Köln /
21  HipHop']">
22  </body>
23 </html>
```

The code is an AngularJS application template. It includes a search input field and a table that displays a list of clubs. The table is filtered based on the search input. The clubs are listed in the following order: Club1 / Frankfurt / House, Club2 / Frankfurt / Rock, Club3 / Frankfurt / HipHop, Club4 / Frankfurt / Electro, Club5 / Frankfurt / Jazz, Club6 / Berlin / House, Club7 / Berlin / Electro, Club8 / Berlin / Rock, Club9 / Berlin / HipHop, Club10 / Berlin / Jazz, Club11 / Köln / Jazz, Club12 / Köln / Rock, Club13 / Köln / House, Club14 / Köln / Electro, Club15 / Köln / HipHop.

Line 1, Column 1 Spaces: 2 HTML

# DEMO



# Tutorials

- <http://angularjs.de/buch/np-app-minimal>
- <https://thinkster.io/angulartutorial/a-better-way-to-learn-angularjs/>
- <https://egghead.io/series/angularjs-app-from-scratch-getting-started>

Danke für eure Aufmerksamkeit