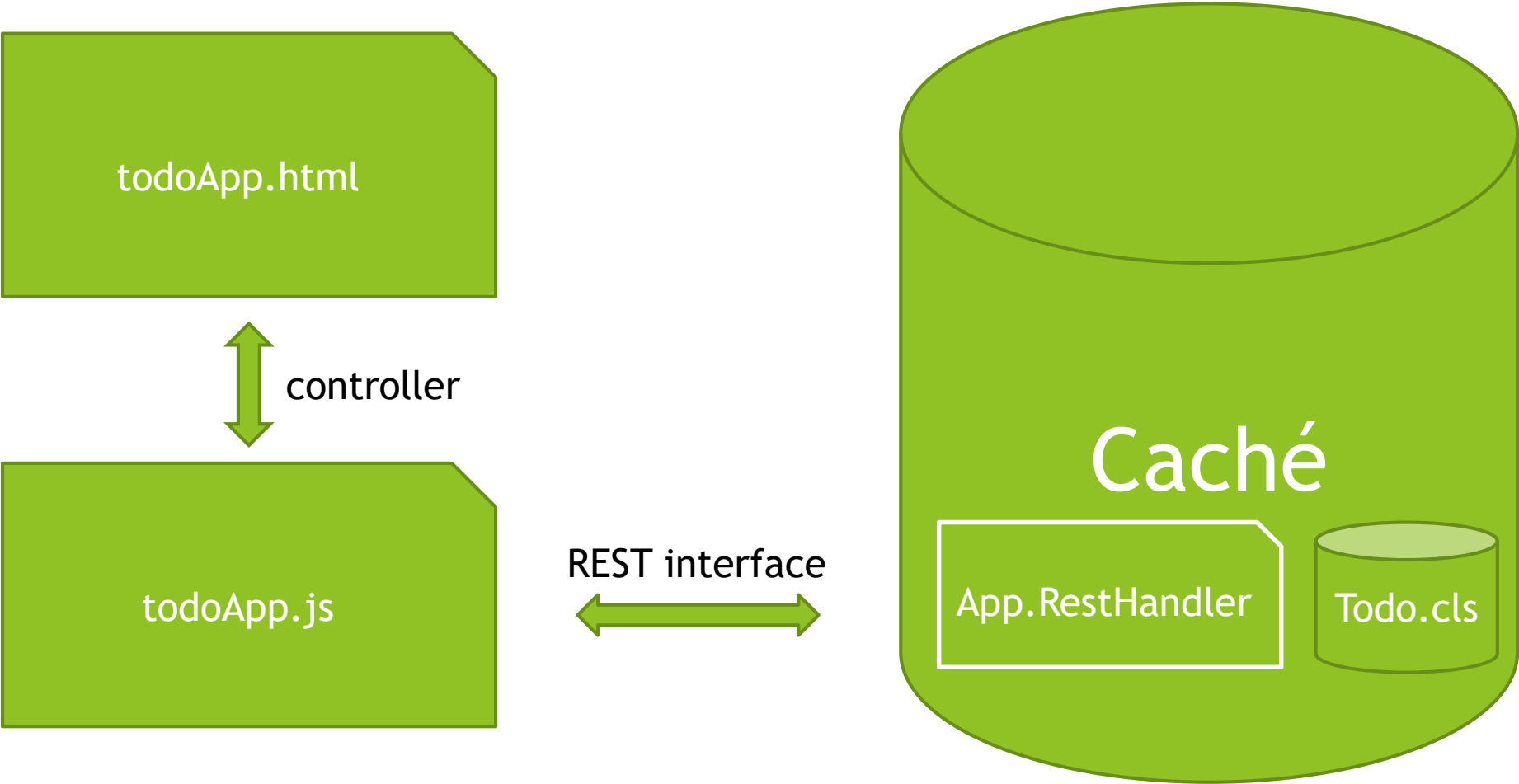


CUG - todo app in AngularJS

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A Simple AngularJS todo application



todoApp.html : AngularJS framework

```
<html>
  <head>
    <link rel="stylesheet" type="text/css" href="nglib/bootstrap/css/bootstrap.min.css" />
  </head>

  <body>
    <div ng-app="ToDoApp">
      <div ng-controller="ToDoController">
        ...
      </div> <!--controller-->
    </div> <!--ToDoApp-->

    <script type="text/javascript" src="nglib/jquery-1.9.0.min.js"></script>
    <script type="text/javascript" src="nglib/angular.min.js"></script>
    <script type="text/javascript" src="nglib/bootstrap/js/bootstrap.min.js"></script>
    <script type="text/javascript" src="nglib/angular-resource.min.js"></script>
    <script type="text/javascript" src="ToDoApp.js"></script>
  </body>
</html>
```

todoApp.html : Bootstrap framework

```
<link rel="stylesheet" type="text/css" href="nglib/bootstrap/css/bootstrap.min.css" />

<div class="col-md-8">

  <div class="panel panel-default">

    <div class="panel-heading">

    </div>

    <div class="panel-body">

    . . .

    </div> <!--panel body -->
  </div> <!--panel default -->
</div> <!--col-md-8-->

<script type="text/javascript" src="nglib/bootstrap/js/bootstrap.min.js"></script>
```

todoApp.html : Angular two-way binding

```
<div class="panel-heading">  
  {{todos.length}} Todos &nbsp;    
  <input type="text" ng-model="inputNew.description" my-enter="newToDo(inputNew.description)"/>  
</div>
```

todoApp.html : Angular Directives

```
<tr ng-repeat="todo in todos" ng-class="{ 'info': $index === selectedRow }">
  <td ng-show="$index !== selectedRow" ng-click="selectToDo($index);">
    {{todo.Description}}
  </td>
  <td ng-show="$index === selectedRow">
    <input type="text" ng-model="todo.Description" my-enter="saveToDo(todo)"
      ng-blur="saveToDo(todo)"/>
  </td>
  <td ng-show="todo.Active" ng-click="toggleActive(todo);">
    <span class="glyphicon glyphicon-ok"></span>
  </td>
  <td ng-show="!todo.Active" ng-click="toggleActive(todo);">
    <span class="glyphicon glyphicon-ban-circle"></span>
  </td>
  <td ng-click="deleteToDo(todo, $index);">
    <a class="icon-link"><span class="glyphicon glyphicon-remove"></span></a>
  </td>
</tr>
```

AngularJS

Custom

todoApp.js : define app & controller

```
var TodoApp = angular.module('TodoApp', ['ngResource']);
TodoApp.controller('TodoController', ['$scope', 'restToDo', function($scope, restToDo) {
  $scope.getTodos = function(id) {
    restToDo.query({id:id}, function(data) {
      $scope.todos = data.children;
    });
  };
  $scope.newToDo = function(description) {
    var todo = {'Description' : description, 'Active' : true};
    restToDo.update({id:''}, todo, function(data) {
      todo.ID = data.id;
      $scope.todos.push(todo);
      $scope.inputNew.description = '';
    });
  };
  $scope.deleteToDo = function(todo, index) {
    restToDo.remove({id:todo.ID}, function(data) {
      $scope.todos.splice(index,1);
    });
  };
  $scope.saveToDo = function(todo) {
    restToDo.update({id:todo.ID}, todo, function(data) {
      console.log(data, 'saved');
    });
  };
};
```

todoApp.js : define rest to Caché

```
var TodoApp = angular.module('TodoApp', ['ngResource']);

HostURL = function() {
    return "http://127.0.0.1:57772/csp/user/rest/api/"
};

TodoApp.factory('restToDo', function($resource) {
    return $resource(
        HostURL() + "todo/:id", {}, {
            query: { method: "GET", isArray: false },
            update: { method: "POST", params : {id : '@id'} },
            remove: { method: "DELETE", params : {id : '@id'} }
        });
});
```


Caché : define WebApplication

Naam	<input type="text" value="/csp/user/rest"/>
	Verplicht. (bv. /csp/toepnaam)
Omschrijving	<input type="text"/>
NameSpace	<input type="text" value="USER"/> Default Toepassing voor USER: /csp/user
ingeschakeld	<input checked="" type="checkbox"/> Applicatie <input checked="" type="checkbox"/> CSP/ZEN <input checked="" type="checkbox"/> Inkomende Web Service <input type="checkbox"/> DeepSee <input type="checkbox"/> iKnow
Toegestane Klassen	<input type="text"/>
Beveiliging Instellingen	Resource verplicht <input type="text"/> Gro Toegestane Authenticatiemethoden <input checked="" type="checkbox"/> Niet-geverifieerd <input type="checkbox"/> Wachtwoor
Sessie Instellingen	Time-out voor sessie <input type="text" value="900"/> Seconden Gebeurten Cookie voor sessie gebruiken <input type="text" value="Altijd"/> Cookie-pad sessie /cs
Dispatch Klasse	<input type="text" value="App.RestHandler"/>

Caché : define RestHandler

```
Class App.RestHandler Extends %CSP.REST
```

```
{
```

```
Parameter HandleCorsRequest = {1};
```

```
XData UriMap
```

```
{
```

```
<Routes>
```

```
<Route Url="/api/todo" Method="GET" Call="GetToDo"/>
```

```
<Route Url="/api/todo/:id" Method="GET" Call="GetToDo"/>
```

```
<Route Url="/api/todo" Method="POST" Call="SaveToDo"/>
```

```
<Route Url="/api/todo/:id" Method="POST" Call="SaveToDo"/>
```

```
<Route Url="/api/todo/:id" Method="DELETE" Call="DeleteToDo"/>
```

```
</Routes>
```

```
}
```

Caché : implement methods

```
ClassMethod GetToDo(id As %Integer = "") As %Status
{
    . . .
    Set sql="Select * From Data.ToDo"
    If id="" Set sql=sql_ " Where ID = "_id
    If $Data(%response) Set %response.ContentType="application/json"
    Do ##class(%ZEN.Auxiliary.jsonSQLProvider).%WriteJSONFromSQL(,sql,"tuw",10000)
    Quit $$$OK
}

ClassMethod SaveToDo(id As %Integer = "") As %Status
{
    . . .
    set objStream=%request.Content
    set line = "" While 'objStream.AtEnd {Set line = line _ objStream.ReadLine() }
    set stat = ##class(%ZEN.Auxiliary.jsonProvider).%ConvertJSONToObject(line,,.pObject)
    Set objToDo=##class(Data.ToDo).%OpenId(id)
    If '$IsObject(objToDo) { Set objToDo = ##class(Data.ToDo).%New() }
    Set objToDo.Description = $ZCVT(pObject.Description,"I","UTF8")
    Set objToDo.Active = $Select(pObject.Active:1, 1:0)
    Set sc = objToDo.%Save()
    Quit $$$OK
}

ClassMethod DeleteToDo(id As %Integer) As %Status
{
    . . .
    If $Data(id) Do ##class(Data.ToDo).%DeleteId(id)
    Quit $$$OK
}
```

AngularJS : (my) Conclusion

- ▶ Clean separation front-end - back-end
- ▶ Modern, responsive, multi-device
- ▶ Big community, lots of resources (code, training) available
- ▶ Driven by Google & community
- ▶ Angular 2 is completely different from Angular 1
- ▶ Where do you put your logic ?
- ▶ Learn Javascript / TypeScript
- ▶ Overview in big application projects

Resources

- ▶ AngularJS website <https://angularjs.org/>
- ▶ Code on <https://github.com/DannyWijnschenk/todoApp>
- ▶ Presentation on <https://cugbenelux.wordpress.com/>
- ▶ Questions on danny@winfo.be