

# Angular

Services

Filters

Directives

# Content

- Angular services
  - Why we need service (unstable controllers)
  - Factory vs service
  - Encapsulation with factory
- Angular filters
  - Filtering filters (on arrays)
  - Transforming filters (on values)
- Angular directives

# Services

- Demo the ephemeral nature of controllers
- Solution using factory

```
<div ng-switch on="ctrl.myVar">
  <div ng-switch-when="tab1">Der er blevet klikket på switch 1</div>
  <div ng-switch-when="tab2">Der er blevet klikket på switch 2</div>
  <div ng-switch-when="tab3">Der er blevet klikket på switch 3
    <div ng-controller="subctrl as ctrl">
      <ul><li ng-repeat="item in ctrl.list track by $index">{{item}}</li></ul>
      <input type="text" ng-model="ctrl.inputtext.first">
      <input type="text" ng-model="ctrl.inputtext.second">
      <button ng-click="ctrl.addItem()">Add item</button>
    </div>
  </div>
</div>
```

# Built-in filtering with angular

- Using the | character to filter

```
<input ng-model="ctrl.filterstring">
<ul>
  <li ng-repeat="item in ctrl.list | filter:ctrl.filterstring">
    {{item}}
  </li>
</ul>
```

AngularJS provides filter

- currency** Format
- date** Format a da
- filter** Select a s
- json** Format an o
- limitTo** Limits an
- lowercase** Forma
- number** Format a
- orderBy** Orders a
- uppercase** Forma

```
<li>Amount - {{ctrl.amount}}</li>
<li>Amount - Default Currency: {{ctrl.amount| currency}}</li>
<li>Amount - INR Currency: {{ctrl.amount| currency:'&#163_'}}</li>
<li>Amount - Number: {{ctrl.amount| number}}</li>
<li>Amount - No. with 4 decimals: {{ctrl.amount| number:4}}</li>
<li>Name with no filters: {{ctrl.name}}</li>
<li>Name - lowercase filter: {{ctrl.name| lowercase}}</li>
<li>Name - uppercase filter: {{ctrl.name| uppercase}}</li>
<li>The JSON Filter: {{ctrl.obj| json}}</li>
<li>Timestamp: {{ctrl.startTime}}</li>
<li>Default Date filter: {{ctrl.startTime| date}}</li>
<li>Medium Date filter: {{ctrl.startTime| date:'medium'}}</li>
<li>Custom Date filter: {{ctrl.startTime| date:'M/dd, yy'}}</li>
```

```
</ul>
```

# Custom Filters

- Always returning a function
- 2 types of custom filter
  - Transforming
    - On single values
    - Returned filter function returns a single value
  - Filtering
    - On arrays
    - Returned filter function returns a partial array

# Why Directive

- 2 major purposes
  1. Behaviour modifiers and
    - Like ng-show and ng-model
  2. Resuable components
    - Like ng-include and ng-switch
    - Makes large html more modular and managable

# Directives

- Return an object
  - Object parameters:
    - restrict : 'EACM', (element, attribute, class or comment)
    - scope: isolate scope (detach from controllers scope).
    - templateUrl / template: content to put in html
    - controller: local controller
    - transclude
    - link: add function to manipulate DOM
    - require

# Simple directive

- Used to just apply reusable code

```
angular.module('stockMarketApp')  
  .directive('stockWidget', [function() {  
    return {  
      templateUrl: 'sub/stock.html',  
      restrict: 'AE' //Restricts this directive s  
    };  
  }];
```

```
angular.module('stockMarketApp')  
  .directive('stockWidget', [function() {  
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    };  
  }];
```



# Complex directive

- Use the link property of the directive object
  - Link references a function that can manipulate
    - Scope, elements array and the element attributes

```
angular.module('stockMarketApp')
.directive('stockWidget', [function() {
  return {
    templateUrl: 'sub/stock2.html',
    restrict: 'AE',

    link: function($scope, $element, $attrs) { // this $scope
      $scope.getChange = function(stock) {
        return Math.ceil(((stock.price - stock.previous) /
          stock.previous) * 100);
      };
    }
  };
}]);
```

# Directives continued

```
<div my-dom-directive="" test-attr="Hejsa">Click Me!</div>  
<script>
```

```
var controller = function($scope) { ...6 lines };  
  
angular.module('app', [])  
  .directive('myDomDirective', function () {  
    return {  
      link: function ($scope, element, attrs) {  
        element.bind('click', function () {  
          element.html('You clicked me!');  
        });  
        element.bind('mouseenter', function () {  
          element.css('background-color', 'yellow');  
        });  
        element.bind('mouseleave', function () {  
          element.css('background-color', 'white');  
        });  
        alert(attrs.testAttr); //The way to parse in parameters  
      }  
    }  
  });
```