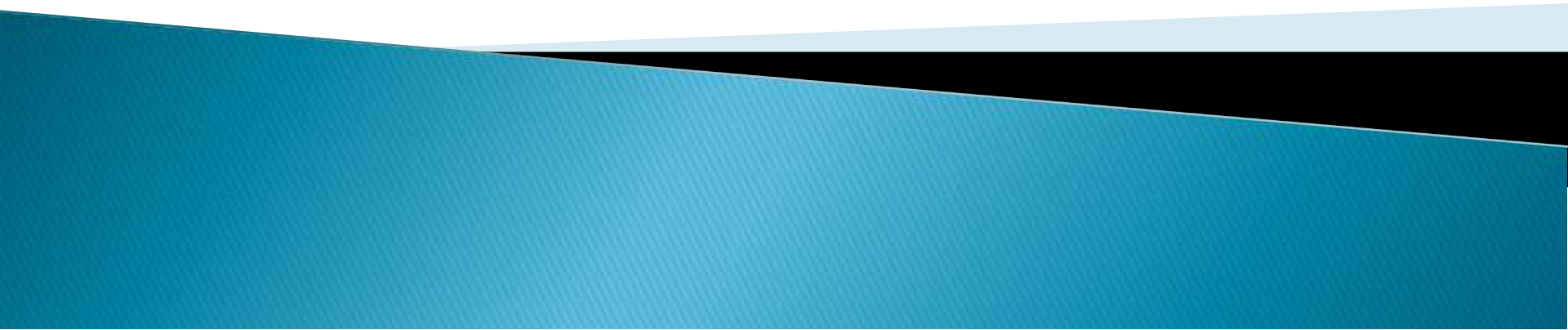
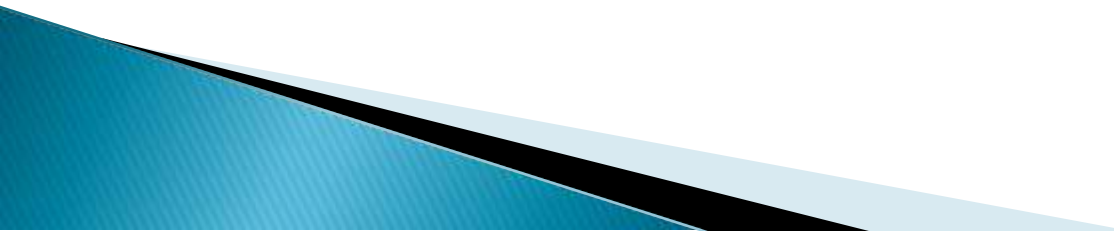


ANGULAR JS

FILTERS



AngularJS Scope

- ▶ The scope is the binding part between the HTML (view) and the JavaScript (controller).
 - ▶ The scope is an object with the available properties and methods.
 - ▶ The scope is available for both the view and the controller.
 - ▶ When you make a controller in AngularJS, you pass the `$scope` object as an argument
- 

Understanding the Scope

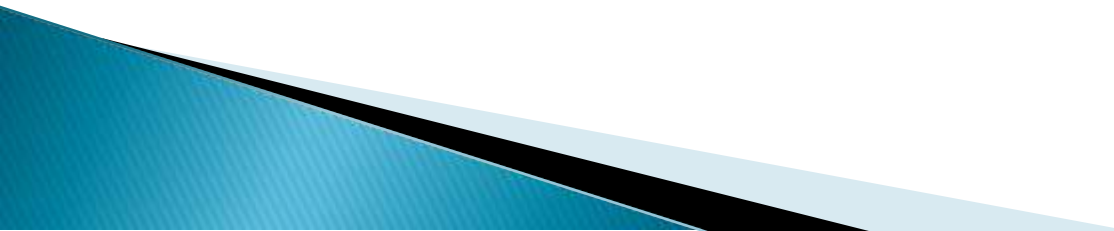
- ▶ AngularJS application to consist of:
 - View, which is the HTML.
 - Model, which is the data available for the current view.
 - Controller, which is the JavaScript function that makes/changes/removes/controls the data.
- ▶ Then the scope is the Model.
- ▶ The scope is a JavaScript object with properties and methods, which are available for both the view and the controller.
- ▶ If you make changes in the view, the model and the controller will be updated

```
<!DOCTYPE html>
<html>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.
min.js"></script>
<body>
```

```
<div ng-app="myApp" ng-controller="myCtrl">
<input ng-model="name">
<h1>My name is {{name}}</h1>
</div>
<script>
var app = angular.module('myApp', []);
app.controller('myCtrl', function($scope) {
    $scope.name = "Welcome";
});
</script>
```

<p>When you change the name in the input field, the changes will affect the model, and it will also affect the name property in the controller.</p>
</body></html>

Root Scope

- ▶ All applications have a `$rootScope` which is the scope created on the HTML element that contains the `ng-app` directive.
 - ▶ The `rootScope` is available in the entire application.
 - ▶ If a variable has the same name in both the current scope and in the `rootScope`, the application uses **the one in the current scope.**
- 

```
<!DOCTYPE html>
<html>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.min.js"></script>
<body ng-app="myApp">
```

```
<p>The rootScope's favorite color:</p>
<h1>{{color}}</h1>
```

```
<div ng-controller="myCtrl">
```

```
<p>The scope of the controller's favorite color:</p>
<h1>{{color}}</h1>
```

```
</div>
```

```
<p>The rootScope's favorite color is still:</p>
<h1>{{color}}</h1>
```

```
<script>
var app = angular.module('myApp', []);
app.run(function($rootScope) {
  $rootScope.color = 'blue';
});
```

AngularJS Filters

- ▶ Filters can be added in AngularJS to format data.
- ▶ AngularJS provides filters to transform data:
 - Currency– Format a number to a currency format.
 - date –Format a date to a specified format.
 - filter –Select a subset of items from an array.
 - Json– Format an object to a JSON string.
 - limitTo– Limits an array/string, into a specified number of elements/characters.
 - Lowercase– Format a string to lower case.
 - number– Format a number to a string.
 - orderBy– Orders an array by an expression.
 - uppercase– Format a string to upper case.

Adding Filters to Expressions

- ▶ Filters can be added to expressions by using the pipe character |, followed by a filter.
- ▶ The uppercase filter format strings to upper case

```
<div ng-app="myApp" ng-controller="personCtrl">
```

```
<p>The name is {{ lastName | uppercase }}</p>
```

```
</div>
```

```
<div ng-app="myApp" ng-controller="personCtrl">
```

```
<p>The name is {{ lastName | lowercase }}</p>
```

```
</div>
```



```
<!DOCTYPE html>
<html>
<script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.
min.js"> </script>
<body>

<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 = "Sri",
    $scope.lastName = "Hari"
});
</script>

</body>
</html>
```

Adding Filters to Directives

- ▶ Filters are added to directives, like ng-repeat, by using the pipe character |, followed by a filter

```
<div ng-app="myApp" ng-controller="namesCtrl">
```

```
<ul>
```

```
<li ng-repeat="x in names | orderBy:'country'">  
  {{ x.name + ', ' + x.country }}
```

```
</li>
```

```
</ul>
```

```
</div>
```

```
<body>
```

```
<div ng-app="myApp" ng-controller="namesCtrl">
```

```
<p>Looping with objects:</p>
```

```
<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'},
```

```
    {name:'Hege',country:'Norway'},
```

```
    {name:'Joe',country:'Denmark'},
```

```
    {name:'Gustav',country:'Sweden'},
```

```
    {name:'Birgit',country:'Denmark'},
```

```
    {name:'Mary',country:'England'},
```

```
    {name:'Kai',country:'Norway'}
```

```
  ];
```

```
});
```

```
</script></body>
```

currency Filter

- ▶ The currency filter formats a number as currency

```
<div ng-app="myApp" ng-controller="costCtrl">
```

```
<h1>Price: {{ price | currency }}</h1>
```

```
</div>
```

```
<script>
```

```
var app = angular.module('myApp', []);  
app.controller('costCtrl', function($scope) {  
    $scope.price = 58;  
});
```

```
</script>
```

filter Filter

- ▶ The filter filter selects a subset of an array.
- ▶ The filter filter can only be used on arrays, and it returns an array containing only the matching items.

Return the names that contains the letter "i"

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

Filter an Array Based on User Input

- ▶ By setting the `ng-model` directive on an input field, we can use the value of the input field as an expression in a filter.

```
<div ng-app="myApp" ng-controller="namesCtrl">
```

```
<p>Type a letter in the input field:</p>
```

```
<p><input type="text" ng-model="test"></p>
```

```
<ul>
```

```
  <li ng-repeat="x in names | filter:test">
```

```
    {{ x }}
```

```
  </li></ul>
```

```
</div>
```

```
<script>
```

```
angular.module('myApp', []).controller('namesCtrl', function($scope) {
```

```
  $scope.names = [
```

```
    'Jani',
```

```
    'Carl',
```

```
    'Margareth',
```

```
    'Hege',
```

```
    'Joe',
```

```
    'Gustav',
```

```
    'Birgit',
```

```
    'Mary',
```

```
    'Kai'
```

```
  ];
```

```
});
```

```
</script>
```


Sort an Array Based on User Input

- ▶ By adding the `ng-click` directive on the table headers, we can run a function that changes the sorting order of the array

```
<tr ng-repeat="x in names | orderBy:myOrderBy">
```

```
<td>{{x.name}}</td>
```

```
<td>{{x.country}}</td>
```

```
</tr>
```

```
</table>
```

```
</div>
```

```
<script>
```

```
angular.module('myApp', []).controller('namesCtrl', function($scope) {
```

```
  $scope.names = [
```

```
    {name:'Jani',country:'Norway'},
```

```
    {name:'Carl',country:'Sweden'},
```

```
    {name:'Margareth',country:'England'},
```

```
    {name:'Hege',country:'Norway'},
```

```
    {name:'Joe',country:'Denmark'},
```

```
    {name:'Gustav',country:'Sweden'},
```

```
    {name:'Birgit',country:'Denmark'},
```

```
    {name:'Mary',country:'England'},
```

```
    {name:'Kai',country:'Norway'}
```

```
  ];
```

```
  $scope.orderByMe = function(x) {
```

```
    $scope.myOrderBy = x;
```

```
  }
```

```
});
```

Custom Filters

- ▶ You can make your own filters by registering a new filter factory function with your module

```
return function(x) {  
  var i, c, txt = "";  
  for (i = 0; i < x.length; i++) {  
    c = x[i];  
    if (i % 2 == 0) {  
      c = c.toUpperCase();  
    }  
    txt += c;  
  }  
  return txt;  
};
```

```
});  
app.controller('namesCtrl', function($scope) {  
  $scope.names = [  
    'Jani',  
    'Carl',  
    'Margareth',  
    'Hege',  
    'Joe',  
    'Gustav',  
    'Birgit',  
    'Mary',  
    'Kai'  
  ];  
});
```