

specialist ICT learning



AngularJS: Filters

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Topics

- What is a filter?
- Built-in filters
- Using filters in Controllers, Services, Directives
- Creating a custom filter

What is a Filter?

What is a Filter?

- A filter formats the value of an expression
 - > `{{1234.56789|number}}` results in 1,234.568
- A filter can have arguments
 - > number filter has fraction argument
 - > `{{1234.56789|number:1}}` results in 1,234.6
- A filter is used mostly in view templates, but could be used in the JavaScript code of controllers, services, directives
- Angular provides a set of built-in filters
 - > number, currency, json, etc.
- You can and want create your own custom filters as well

Using filters in view template

- Filters can be applied to expressions in view templates using the following syntax:
 - > syntax: `{{ expression | filter }}`
 - > example: `{{ 12 | currency }}` // results in \$12.00
- Filters can be chained
 - > syntax: `{{ expression | filter1 | filter2 | ... }}`
- Filters can have arguments
 - > syntax: `{{ expression | filter:argument1:argument2:... }}`
 - > example: `{{ 1234 | number:2 }}` // results in 1,234.00

Built-in Filters

Angular Provided Built-in Filters

- Used for formatting
 - > currency: `{{ price | currency}}`
 - > uppercase, lowercase: `{{ firstName | uppercase }}`
 - > number: `{{population|number}}`
 - > json: `{{object|json}}`
- Used for text filtering
 - > filter: `ng-repeat="student in students | filter:myTextFilter:true">`
 - > limitTo: `ng-repeat="student in students | limitTo:myLimit">`
- Used for ordering
 - > orderBy: `<li ng-repeat="x in names | orderBy:'-name'| orderBy:'country'">`

Lab:

Exercise 1: Built-in Filters
3304_angularjs_04_filters.zip



Using Filters in Controllers, Directives, Services

Using filters in controllers, services

- You can also use filters in controllers, services, and directives
- For this, inject a dependency with the name `<filterName>Filter` to your controller/service/directive
 - > Using the dependency `numberFilter` will inject the `number` filter.
 - > The injected `<filterName>Filter` function takes the value to format as first argument and filter parameters starting with the second argument

```
controller('FilterController', ['filterFilter', function (filterFilter) {  
    this.array = [{name: 'Tobias'}, {name: 'Jeff'}, {name: 'Brian'}, {name: 'Igor'},  
                 {name: 'James'}, {name: 'Brad'} ];  
    // Use 'filter' filter in the controller  
    this.filteredArray = filterFilter(this.array, 'a');  
}]);
```



value to format



argument

Lab:

Exercise 2: Use filter in controller
3304_angularjs_04_filters.zip



Creating a Custom Filter

How to Define a Custom Filter?

- Register a **new filter factory function** with your module
 - > This factory function should return a **new filter function** which takes the input value as the first argument
 - > Any filter arguments are passed in as additional arguments to the filter function

```
myApp.filter('reverseFilter', function () {  
  return function (input, uppercase) { // "input" represents input while "uppercase" is an argument  
    // Reverse the input and save it in out  
    input = input || "";  
    var out = "";  
    for (var i = 0; i < input.length; i++) { out = input.charAt(i) + out;}  
    // conditional based on optional argument  
    if (uppercase) {  
      out = out.toUpperCase();  
    }  
    return out;  
  };  
});
```

Lab:

Exercise 3: Create a custom filter
3304_angularjs_04_filters.zip



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