Instructor N

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Lesson Objectives

➢ **Built-In Filters**

➢ **Creating Custom Filters**

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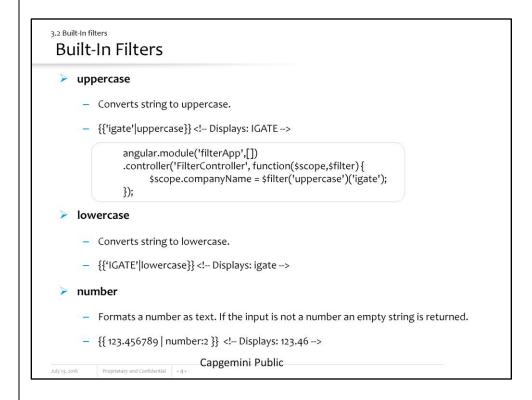
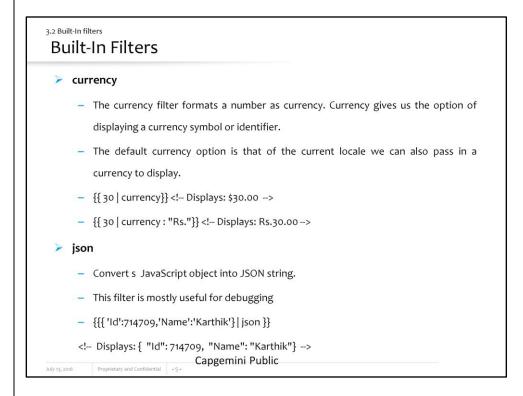Add instructor notes here.

3.1: Introduction to Filters

Filters

➢ A filter formats the value of an expression for display to the user.

➢ Filters can be invoked in HTML with the | (pipe) character inside the template.

➢ We can also use filters from within JavaScript by using the $filter service.

➢ To pass an argument to a filter in the HTML form, we pass it with a colon after the filter name (for multiple arguments, we can simply append a colon after each argument)

➢ Angular gives us several built-in filters as well as an easy way to create our own.

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3.2 Built-In filters
Built-In Filters

➢ **uppercase**
- Converts string to uppercase.
- {{'igate'|uppercase}} <!-- Displays: IGATE -->

```
angular.module('filterApp',[])
.controller('FilterController', function($scope,$filter) {
    $scope.companyName = $filter('uppercase')('igate');
});
```

➢ **lowercase**
- Converts string to lowercase.
- {{'IGATE'|lowercase}} <!-- Displays: igate -->

➢ **number**
- Formats a number as text. If the input is not a number an empty string is returned.
- {{ 123.456789 | number:2 }} <!-- Displays: 123.46 -->

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3.2 Built-In filters
Built-In Filters

➢ **currency**

  – The currency filter formats a number as currency. Currency gives us the option of displaying a currency symbol or identifier.

  – The default currency option is that of the current locale we can also pass in a currency to display.

  – {{ 30 | currency}} <!-- Displays: $30.00 -->

  – {{ 30 | currency : "Rs."}} <!-- Displays: Rs.30.00 -->

➢ **json**

  – Convert s JavaScript object into JSON string.

  – This filter is mostly useful for debugging

  – {{{ 'Id':714709,'Name':'Karthik'} | json }}

  <!-- Displays: { "Id": 714709, "Name": "Karthik"} -->

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3.2 Built-In filters

Built-In Filters

➢ **date**

- Formats date to a string based on the requested format.

- Date to be formatted can be either a Date object or milliseconds (string or number)

- The date formatter provides us several built-in options. If no date format is passed, then it set to the default mediumDate.

```
angular.module('filterApp',[])
.controller('FilterController', function($scope,$filter) {
    $scope.today = new Date();
    $scope.formattedDate = $filter('date')(new Date(),'EEEE dd, MMMM yyyy');
});
```

- {{today | date:'medium'}} <!-- Displays: Jul 30, 2014 5:13:19 PM -->

- {{today | date:'short'}} <!-- Displays: 7/30/14 5:13 PM -->

- {{today | date:'fullDate'}} <!-- Displays: Wednesday, July 30, 2014-->

- {{today | date:'longDate'}} <!-- Displays: July 30, 2014-->

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3.2 Built-In filters
Built-In Filters

- {{today | date:'mediumDate'}} <!-- Displays: Jul 30, 2014-->
- {{today | date:'shortDate'}} <!-- Displays: 7/30/14 -->
- {{today | date:'mediumTime'}} <!-- Displays: 5:22:21 PM -->
- {{today | date:'mediumTime'}} <!-- Displays: 5:23 PM -->
- {{today | date:'d-M-y'}} <!-- Displays: 30-7-2014 -->
- {{today | date:'d-M-yyyy'}} <!-- Displays: 30-7-2014 -->
- {{today | date:'dd-MM-yy'}} <!-- Displays: 30-07-14 -->
- {{today | date:'EEEE dd, MMMM yyyy'}} <!-- Displays: Wednesday 30, July 2014 -->
- {{today | date:'EEE dd MMM yyyy'}} <!-- Displays: Wed 30 Jul 2014 -->
- {{ today | date:'hh:mm:ss.sss a' }} <!-- Displays: 05:35:31.951 PM -->
- {{ today | date:'hh:mm:ss a' }} <!-- Displays: 05:35:31 PM -->
- {{ today | date:'H:m:s a' }} <!-- Displays: 17:35:31 PM -->
- {{ today | date:'Z' }} <!-- Displays: +0530 -->

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3.2 Built-In filters
Built-In Filters

➢ **filter**

- filter selects a subset of items from an array of items and returns a new array.

- The filter method takes a string, object, or function that it will run to select or reject

  array elements.

filter based on a string   :
```
{{ ['Anil', 'Latha', 'Mahima', 'Sachin', 'Veena'] | filter:'e' }}
<!-- returns array ["Veena"]      'e' returns other than 'Veena'    -->
```

filter based on a function:
```
angular.module('filterApp',[])
.controller('FilterController', function($scope,$filter) {
        var pattern = /^\d{6}$/;
        $scope.getSixDigitsPattern = function(item) {
                return pattern.test(item);
        }
});
```

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3.2 Built-In filters
Built-In Filters

```
{{ ['714709', '562A', '044-235', '801234','ABC'] | filter:getSixDigitsPattern }}
<!-- return array ["714709","801234"] -->

filter based on a object:
    {{
        [
            {"Id":1,"Name":"Anil","Location":"Mumbai"},
            {"Id":2,"Name":"Latha","Location":"Bangalore"},
            {"Id":3,"Name":"Mahima","Location":"Pune"},
            {"Id":4,"Name":"Sachin","Location":"Mumbai"},
            {"Id":5,"Name":"Veena","Location":"Pune"}
        ] | filter:{"Location":"Mumbai"}
    }}
    <!-- returns array
    [
        {"Id":1,"Name":"Anil","Location":"Mumbai"},
        {"Id":4,"Name":"Sachin","Location":"Mumbai"}
    ]
    -->
```

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3.2 Built-In filters
Built-In Filters

➤ **limitTo**

 – limitTo filter creates a new array or string that contains only the specified number of
   elements, either taken from the beginning or end, depending on whether the value is
   positive or negative.

```
{{ 'IGATE GLOBAL SOLUTIONS' | limitTo:5 }}
<!-- returns  first 5 characters: IGATE -->

{{ 'IGATE GLOBAL SOLUTIONS' | limitTo:-9 }}
<!-- returns  last 9 characters: SOLUTIONS -->

{{
     ['Bangalore','Chennai','Hyderabad','Gandhinagar','Mumabai','Noida','Pune']
     | limitTo:2
}}
<!-- returns  first 2 array elements : ["Bangalore","Chennai"] -->
```

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3.2 Built-In filters
Built-In Filters

➢ **orderBy**

— The orderBy filter orders the specific array using an expression.

— It is ordered alphabetically for strings and numerically for numbers.

— It takes 2 parameters. First parameter is the predicate used to determine the order of the sorted array. Second parameter(optional) is a boolean value, if it is true it will sort the data in reverse order.

```
{{['Chennai','Bangalore','Pune','Mumbai'] | orderBy:'toString()'}}
<!-- returns ["Bangalore","Chennai","Mumbai","Pune"] -->


{{[{'Id':1,'Location':'Bangalore'},{'Id':2,'Location':'Chennai'}] | orderBy:'Id':true}}
<!-- returns [{"Id":2,"Location":"Chennai"},{"Id":1,"Location":"Bangalore"}] -->
```

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3.3 Custom filters
Custom Filters

➢ We can easily create custom filters in AngularJS.

```
angular.module('filterApp',[])
.filter('getIntegers',function(){
    return function(numberArray){
        var size = numberArray.length;
        var evenNumbers = [];
        for(counter=0;counter<size;counter++)
        {
            if(numberArray[counter]%2==0)
                evenNumbers.push(numberArray[counter]);
        }
        return evenNumbers;
    }
})

{{[1,2,3,4,5,6,7,8,9,10] | getIntegers}}          <!-- returns [2,4,6,8,10]  -->
```

➢ Filters are just functions to which we pass input. In the function above, we simply take the input as the array on which we are calling the filter.

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Demo

➤ **FiltersDemo**

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Summary

➤ **Filters are just functions to which we pass input.**

➤ **Filters can be invoked in HTML with the | (pipe) character inside the template.**

➤ **We can indicate a parameter to a filter using a colon (:)**

➤ **We can limit a filter to only search in a specific field**

➤ **We can specify custom date formats using date filter**

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