Working with Angular Pipes

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Angular Pipes takes data as input and formats or transform the data to display in the template. We use them to change the appearance of the data before presenting it to the user. The most common use case of pipes is displaying the dates in the correct format as per the user's locale.

In this tutorial, we will show you how to use Angular Pipes. We will see how to pass arguments to the pipe and how to chain multiple pipes. We are also going to look at the few of the angular built-in pipes like currency pipe, date pipe, number pipe, percent pipe, decimal pipe, & slice pipe etc.

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Angular Pipes Syntax

The syntax of the pipe is as follows

```

Expression | pipeOperator[:pipeArguments]

```

Where

Expression : is the expression, which you want to transform

| : is the Pipe Character

pipeOperator : name of the Pipe

pipeArguments : arguments to the Pipe

Pipes Example

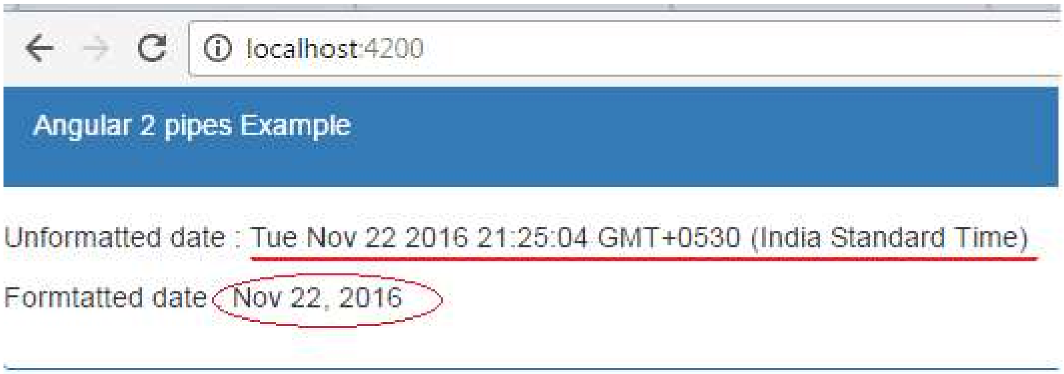
In this example let use Angular built in date pipe to transform the date

Component class

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';

@Component({
   selector: 'app-root',
   templateUrl: `<p> Unformatted date : {{toDate }} </p>
               <p> Formatted date : {{toDate | date}} </p>`
})
export class AppComponent
```

```
{
    title: string = 'pipe Example' ;
    toDate: Date = new Date();
}

```

In the above example, we are taking current date and transforming it into the easily readable format using the date pipe. We have included the unformatted date format for comparison. The output is as shown below



Angular 2 pipes Example

Unformatted date : Tue Nov 22 2016 21:25:04 GMT+0530 (India Standard Time)

Formtatted date Nov 22, 2016

Example of Angular Pipes

Passing arguments to pipes

We can also pass optional arguments to the pipe. The arguments are added to the pipe using a colon (:) sign followed by the value of the argument. If there are multiple arguments separate each of them with the colon (:). For example, we can pass the `format` as the argument to the date pipe, which is Optional. The `medium` is one of the valid value of the format argument, which displays the date in `yMMMdjms` format. The example code is as shown below.

```

{{toDate | date:'medium'}}

```

The parameter `medium` displays the date as **Nov 22, 2016, 10:04:10 PM**

Chaining Pipes

Pipes can be chained together to make use of multiple pipes in one expression. For example in the following code, the `toDate` is passed to the `Date` Pipe. The output of the `Date` pipe is then passed to the `uppercase` pipe.

```

toDate | date | uppercase

```

The Angular Built-in pipes

The Angular has several built-in pipes, which you can use in your application. You can read about them from this link

Some of the important pipes are `Date Pipe`, `Uppercase Pipe`, `Lowercase Pipe`, `Number Pipe`/ `Decimal Pipe`, `Currency Pipe`, and `Percent Pipe`, etc

DatePipe

The `Date pipe` formats the date according to locale rules. The syntax of the date pipe is as shown below

```
date_expression | date[:format]

```

Where

date_expression is a date object or a number

date is the name of the pipe

format is the date and time format string which indicates the format in which date/time components are displayed.

Some of the common format strings are

Component	format	Example
Year	y	2016
Year	yy	16
Month	M	9
Month	M	99
Month	MMM	Nov
Month	MMMM	November
Day	d	9
Day	dd	09

Component	format	Example
hour	j	9
hour	jj	09
hour	h	9 AM
hour	hh	09 AM
hour24	H	13
hour24	HH	13
minute	m	9
minute	mm	09
second	s	9
second	ss	99
Time zone	z	Pacific Standard time
Time zone	Z	GMT-8:00
Time zone	a	PM
era	G	AD
era	GGGG	Anno Domini

Format argument also supports some predefined commonly used formats

Format Name	Equivalent Format strng	Example (for en-US)
medium	yMMMdjms	Sep 3, 2010, 12:05:08 PM
short	yMdjm	9/3/2010, 12:05 PM
fullDate	yMMMMEEEEd	Friday, September 3, 2010
longDate	yMMMMd	September 3, 2010
mediumDate	yMMMd	Sep 3, 2010
shortDate	yMd	9/3/2010
mediumTime	jms	12:05:08 PM
shortTime	jm	12:05 PM

You can read about the complete list from link

Example of Datepipe

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';
@Component({
    selector: 'app-root',
    template:`<p>medium : {{toDate | date:'medium'}} </p>
              <p>short : {{toDate | date:'short'}} </p>
              <p>fullDate : {{toDate | date:'fullDate'}} </p>
              <p>longDate : {{toDate | date:'longDate'}} </p>
              <p>mediumDate : {{toDate | date:'mediumDate'}} </p>
              <p>shortDate : {{toDate | date:'shortDate'}} </p>
              <p>mediumTime : {{toDate | date:'mediumTime'}} </p>
              <p>dd-MM-y : {{toDate | date:'dd-MM-y'}} </p>
              <p>dd-MM-yy HH:mm : {{toDate | date:'dd-MM-yy HH:mm'}} </p>`
})
export class AppComponent
```

```
{
    title: string = 'Angular pipes Example' ;
    toDate: Date = new Date();
}

```

UpperCasePipe & LowerCasePipe

As the name suggests, these pipes transform the string to Uppercase or lowercase

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';

@Component({
    selector: 'app-root',
    template:`<p>Unformatted :{{msg}} </p>
              <p>Uppercase :{{msg | uppercase}} </p>
              <p>Lowercase :{{msg | lowercase}} </p>`
})
export class AppComponent
{
    title: string = 'Angular pipes Example' ;
    msg: string= 'Welcome to Angular';
}

```

Read more about uppercasepipe & lowercasepipe

SlicePipe

Creates a new List or String containing a subset (slice) of the string or array. This Pipe uses the JavaScript API Array.prototype.slice() and String.prototype.slice().

Syntax

```

array_or_string_expression | slice:start[:end]

```

Where

array_or_string_expression is the string to slice

slice is the name of the pipe

start is the start position/index from where the slicing will start

end is the ending index/position in the array/string

The slice pipes take two arguments. The first argument ***start*** is the starting index of the string/array. The second argument **end** is the ending index of the string/array. If the start or end index is negative then the index is counted from end of the string/array

Example

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';
@Component({
   selector: 'app-root',
   template:`<p>Complete String :{{msg}} </p>
         <p>Example 1 :{{msg | slice:11:20}} </p>
         <p>Example 2 :{{msg | slice:-9}} </p>`
})
```

```

export class AppComponent
{
    title: string = 'Angular pipes Example' ;
    msg: string= 'Welcome to Angular ';
}

```

Both the above examples will display Angular. You can read more about slice from this link

DecimalPipe / NumberPipe

The Decimal Pipe is used to Format a number as Text. This pipe will format the number according to locale rules.

Syntax

```

number_expression | number[:digitInfo]

```

Where

number_expression is the number you want to format

number is the name of the pipe

digitInfo is a string which has the following format

{minIntegerDigits}.{minFractionDigits}-{maxFractionDigits}

Where

minIntegerDigits is the minimum number of integer digits to use. Defaults to 1.

minFractionDigits is the minimum number of digits after fraction. Defaults to 0.

maxFractionDigits is the maximum number of digits after fraction. Defaults to 3.

Example

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';
@Component({
    selector: 'app-root',
    template: `<p> Unformatted :{{num}}</p>
              <p> Formatted :{{num | number}}</p>
              <p> Formatted :{{num | number:'3.1-2'}}</p>
              <p> Formatted :{{num | number:'7.1-5'}} </p>`
})

export class AppComponent
{
    title: string = 'Angular pipes Example' ;
    num: number= 9542.14554;
}

```

PercentePipe

Formats the given number as a percentage according to locale rules.

```

number_expression | percent[:digitInfo]

```

Where

number_expression is the number you want to format

percent is the name of the pipe

digitInfo is a string which has the following format. It is similar to used in decimal pipe

Example code

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';

@Component({
   selector: 'app-root',
   template:`<p>Unformatted :{{per}} </p>
           <p>Example 1 :{{per | percent }} </p>
           <p>Example 2 :{{per | percent:'1.2-2'}} </p>`
})
export class AppComponent
{
   title: string = 'Angular pipes Example' ;
   per: number= .7414;2';
}

```

More about Percent pipe from the link

CurrencyPipe

Formats a number as currency using locale rules.

```

number_expression | currency[:currencyCode[:symbolDisplay[:digitInfo]]]

```

Where

number_expression currency to format a number as currency.

Currency is the name of the pipe

currencyCode is the ISO 4217 currency code, such as USD for the US dollar and EUR for the euro.

symbolDisplay is a boolean indicating whether to use the currency symbol or code. Use true to display symbol and false to use code digitInfo is similar to the one used in decimal pipe

Example

```

import { Component } from '@angular/core';
import { FormsModule } from '@angular/forms';
@Component({
   selector: 'app-root',
   template: `<p>Unformatted :{{cur}} </p>
            <p>Example 1 :{{cur | currency }} </p>
            <p>Example 2 :{{cur | currency:'INR':true:'4.2-2'}} </p>`
})

export class AppComponent
{
   title: string = 'Angular pipes Example' ;
   cur: number= 175;
}

```

Read more about the currencyPipe from the link

References

1. Angular Pipes
2. Built in Pipes

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