Built-in Pipes

In this section we are going to look at the pipes that Angular provides out of the box.

○ AsyncPipe: used to work with asynchronous values

○ CurrencyPipe: used to format a number as a local currency

○ DatePipe: used to format a date object to a readable string

○ DecimalPipe: used to format numbers

○ JsonPipe: calls `JSON.stringify` on the input and useful for debugging

○ LowerCasePipe: used to convert a string to lowercase letters

○ PercentPipe: used to format a number as percentage

○ SlicePipe: used to create a subset of list or string

○ UpperCasePipe: used to transform a text to upper case

Date

```
1  {{ input | date:optionalFormat}}
```

○ `input` : a date object or a number (milliseconds since UTC epoch)

○ `optionalFormat` : a string used to format the output. It specifies which components of date and time to include in the output

Using predefined formats

Usage Example: `{{ input | date:'short'}}`

Name	Example
`short`	9/3/2010, 12:05 PM
`shortDate`	9/3/2010

`medium`	Sep 3, 2010, 12:05:08 PM
`mediumDate`	Sep 3, 2010
`longDate`	September 3, 2010
`fullDate`	Friday, September 3, 2010
`shortTime`	12:05 PM
`mediumTime`	12:05:08 PM

Using Custom Formats

○ Generally speaking every date object has a year, month, day, hour, minute, and second.

○ Using a custom string, you can specify which component you would like to include in the output.

Year	Month	Day	Weekday	Hour	Minute	Second
y	M, MMM, MMMM	d	EEE, EEEE	j, h, H	m	s
2016	1, Jan, January	1	Sun, Sunday	1, 1 AM, 1	1	1

Note that every single letter identifier can be used twice to denote a double digit numeric value. For example, `yy` will result in `15` for the year value. Below is a table just to be thorough:

Double Digit

Year	Month	Day	Hour	Minute	Second
yy	MM	dd	jj, hh, HH	mm	ss
16	01	01	01, 01 AM, 01	01	01

Details for Month/Weekday/Hour are summarized in the tables below:

Month Details

M	MMM	MMMM
Digit	Abbr Name	Full Name
1	Jan	January

Weekday Details

EEE	EEEE
Abbr Name	Full Name
Sun	Sunday

Hour Details

j	h	H
Digit	Hour12 AM/PM	Military
13	1 PM	13

Slice

○ The slice pipe is useful when you want a subset of a list or string. One of the common use cases are in when iterating over a list with `ngFor` for example.

TODO

Decimal

○ Used for formatting numbers given a decimal formatter

TODO

Percent

TODO

Currency

TODO

Async

TODO

Json

TODO

LowerCase

TODO

UpperCase

TODO