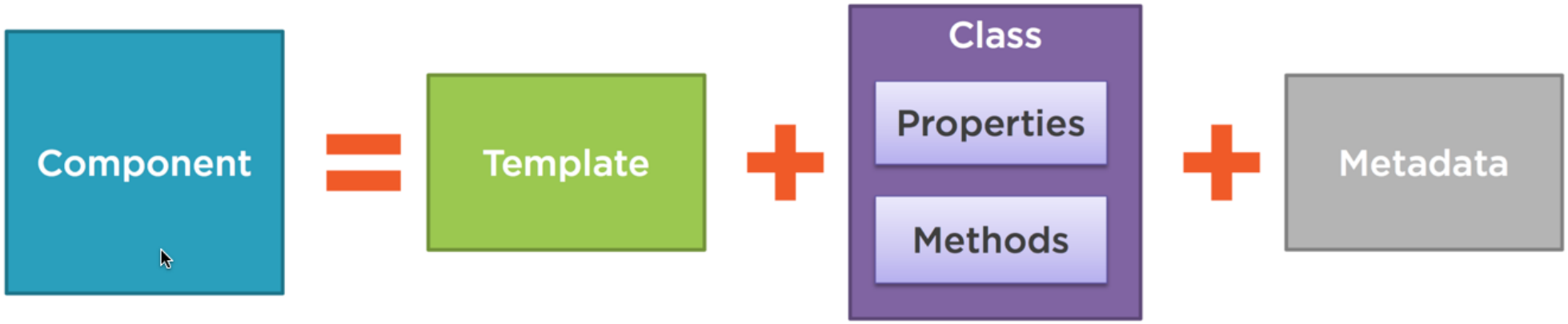
Benjamin Longearet

Angular

Template, interpolation & directives

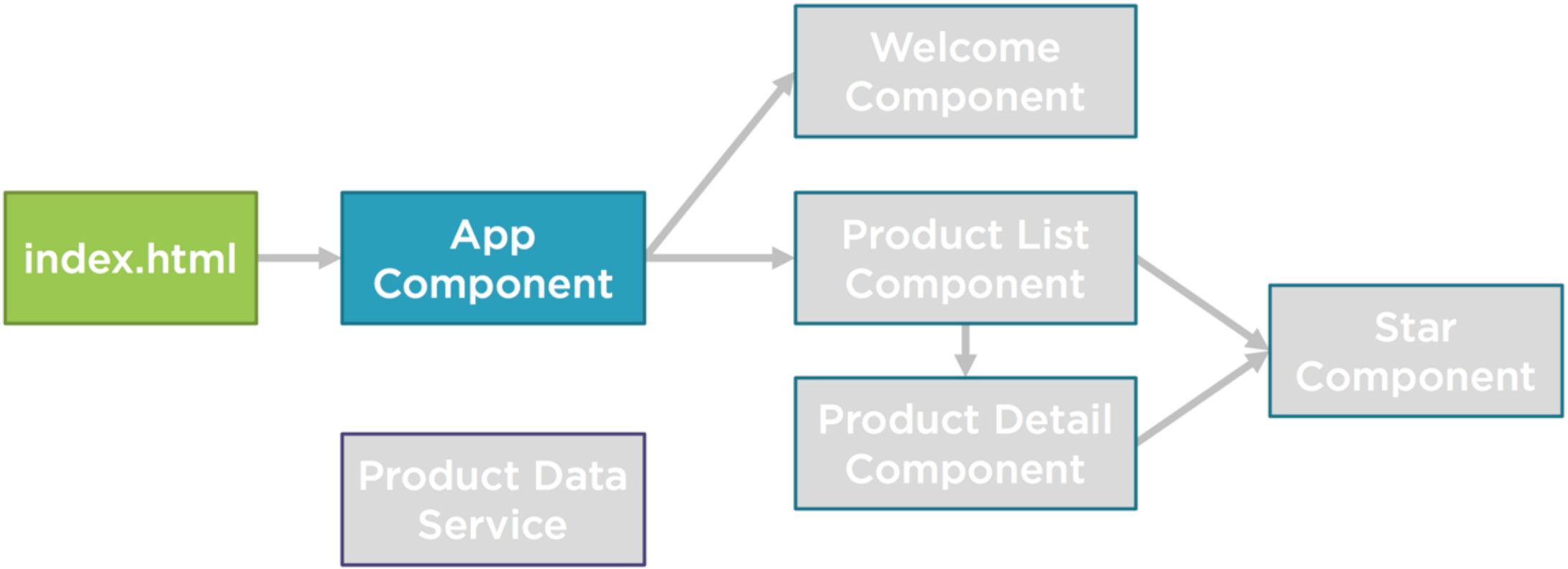
Component



Module Overview

- Building a Template
- Using a Component as a Directive
- Binding with interpolation
- Adding Logic with Directives

Application Architecture



Component

```
// app.component.ts

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

@Component({
    selector: 'nat-app',
    template: `
        <h1>Angular2: {{pageTitle}}</h1>
    `
})

export class AppComponent {
    pageTitle: string = 'Product Management';
}
```

Defining a Template in a Component

Inline Template

```
template:
"<h1>{{pageTitle}}</h1>"
```

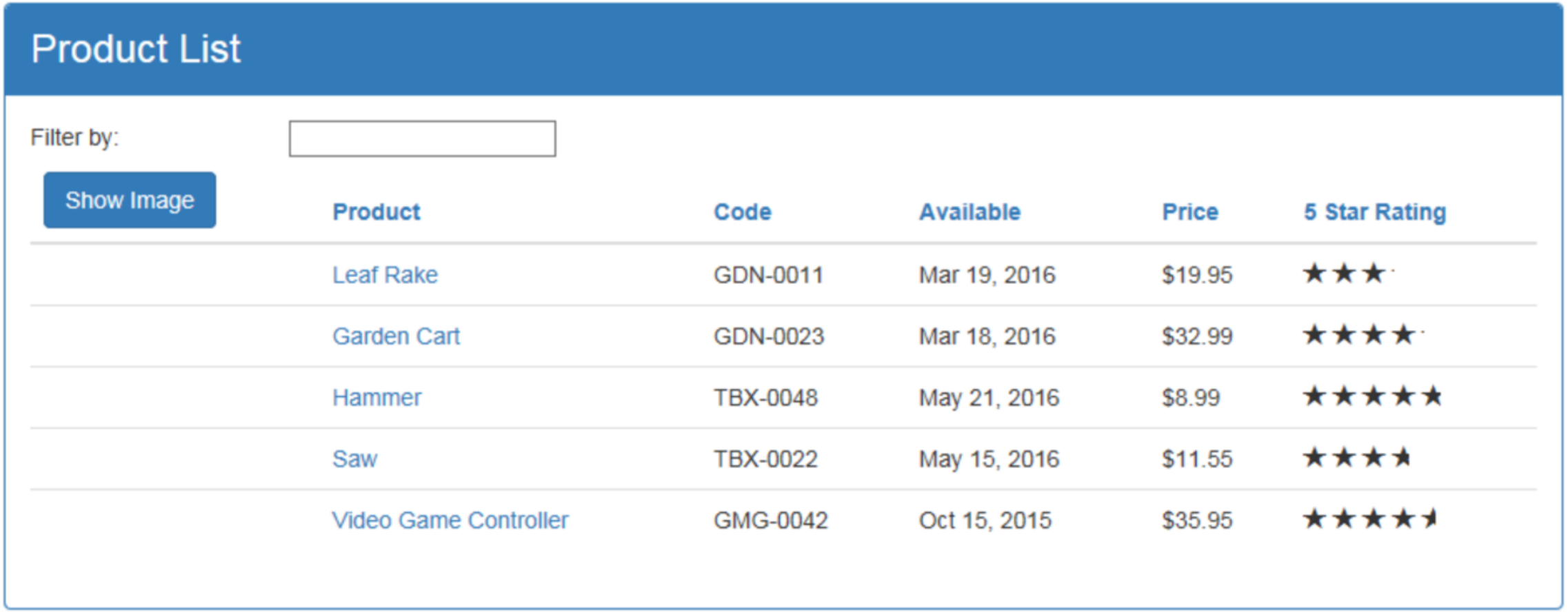
Inline Template ES2015

```
template: `
<div>
 <h1>{{pageTitle}}</h1>
 <div>
     My First Component
 </div>
</div>
`
```

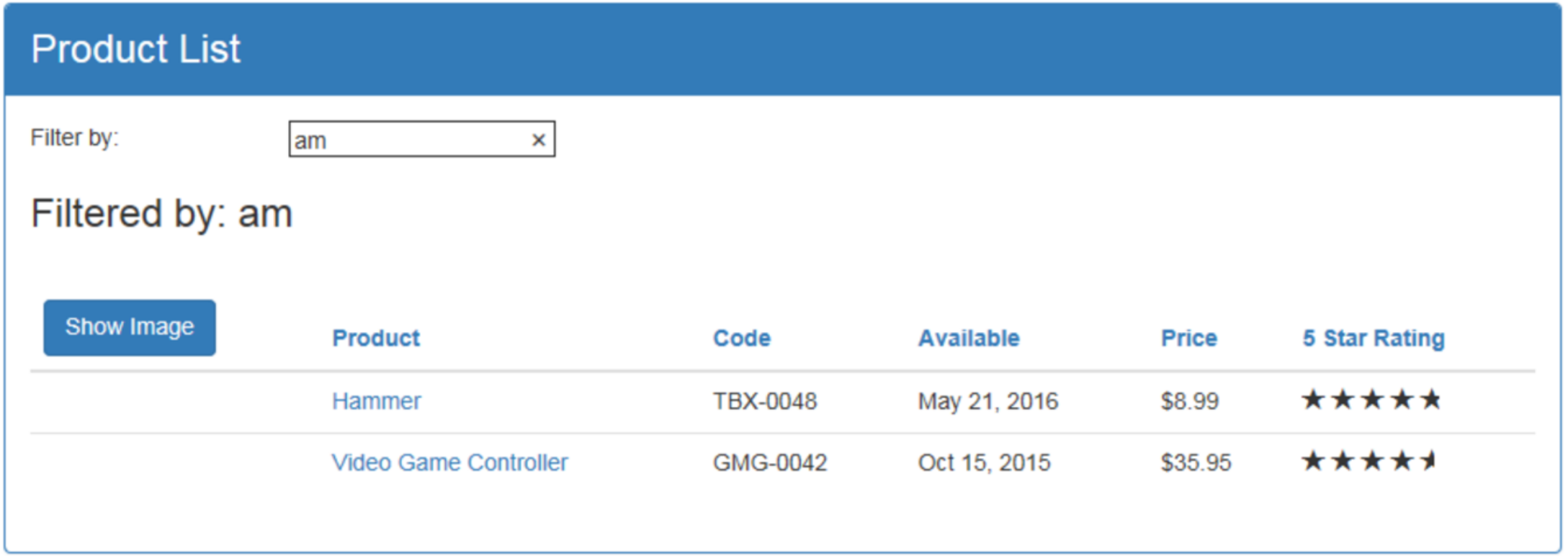
Linked Template

```
templateUrl:
'product-list.component.html'
```

Product List View



Defining a Template in a Component



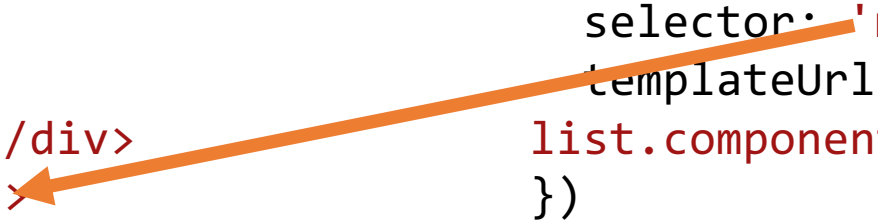
Building the Component

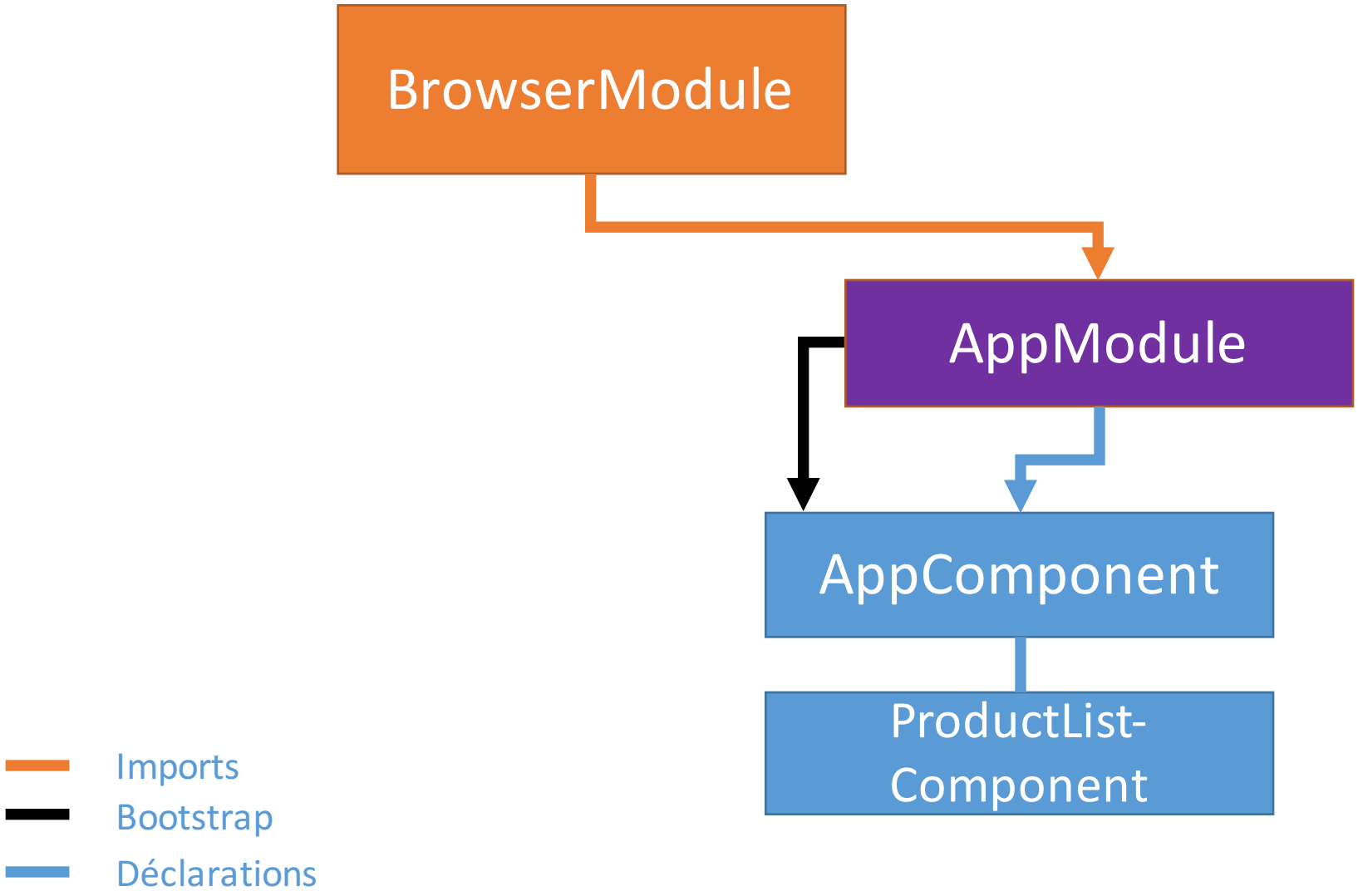
```
// product-list.components.ts

import { Component } from '@angular/core';
@Component({
  selector: 'nat-products',
  templateUrl: 'app/products/product-list.component.html’
})
export class ProductListComponent {
  pageTitle: string = 'Product List';
}
```

Using a component as a Directive

```
// app.components.ts

import { Component } from '@angular/core';
@Component({
  selector: 'nat-app',
  templateUrl: `
    <div><h1>{{pageTitle}}</h1></div>
    <nat-products></nat-products>
  `
})
export class ProductListComponent {
  pageTitle: string = 'Product List';
}
```

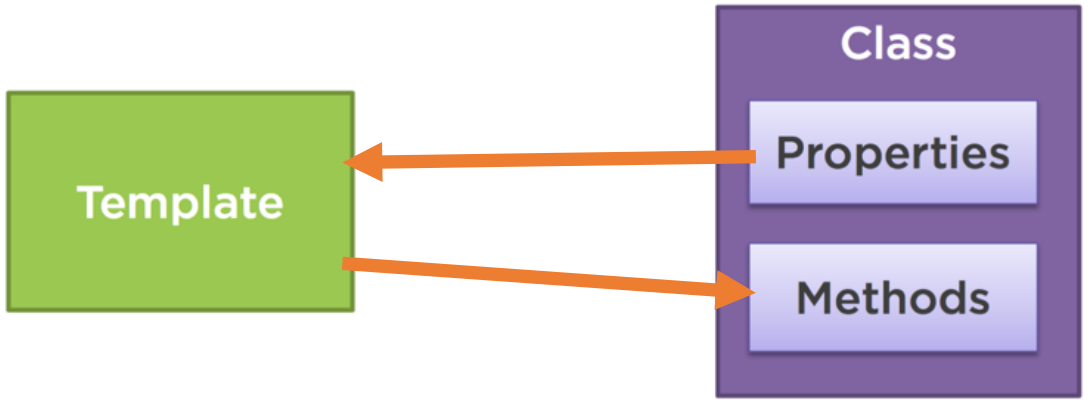
```
// product-list.components.ts

import { Component } from '@angular/core';
@Component({
  selector: 'nat-products',
  templateUrl: 'app/products/product-
list.component.html'
})
export class ProductListComponent {
  pageTitle: string = 'Product List';
}
```



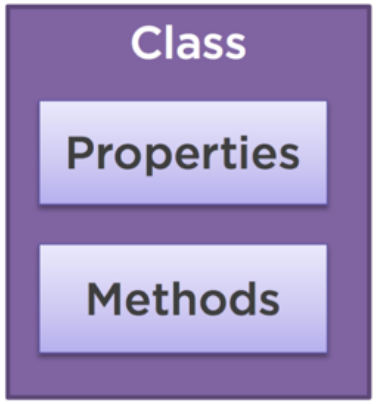

BrowserModule
AppModule
AppComponent
ProductList-
Component
Imports
Bootstrap
Déclarations

Binding

Coordinates communication between the component's class and its template and often involves passing data



Interpolation




```
<h1>{{pageTitle}}</h1>
{{'Title: '+ pageTitle}}
{{2*20+1}}
{{'Title: ' + getTitle()}}
<h1 innerText={{pageTitle}}></h1>
```

```
export class ProductListComponent {
  pageTitle: string = 'Product List';
  getTitle(): string { … };
}
```

Directive

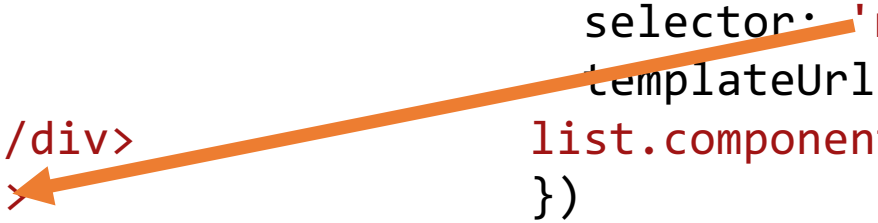
Custom HTML Element or attribute used to power up and extend our HTML

- Custom
- Built-in

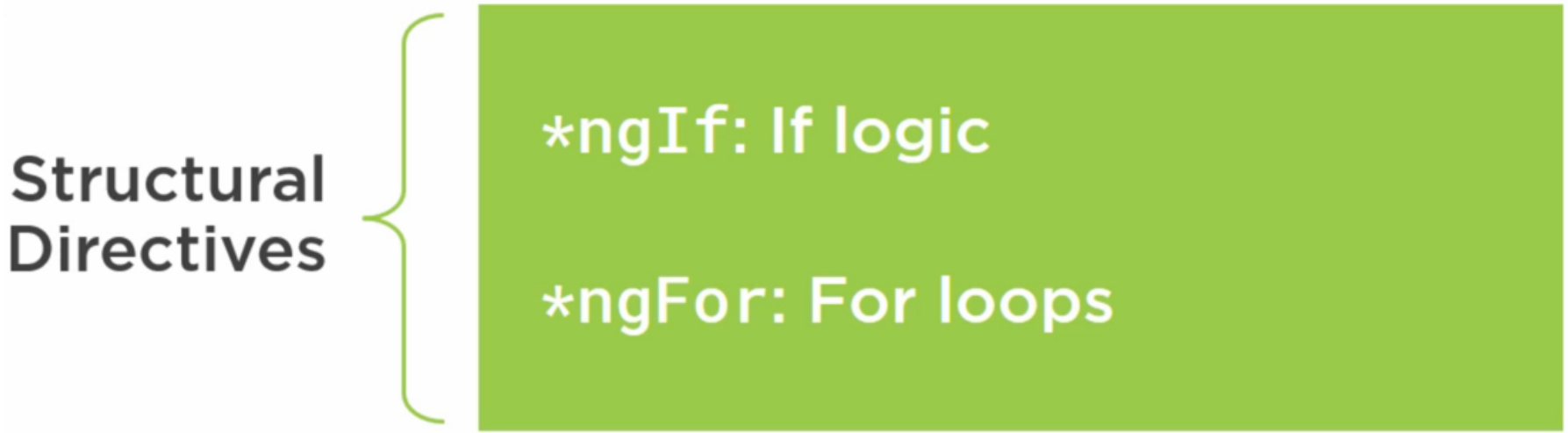
Custom Directive

```
// app.components.ts

import { Component } from '@angular/core';
@Component({
  selector: 'nat-app',
  templateUrl: `
    <div><h1>{{pageTitle}}</h1></div>
    <nat-products></nat-products>
  `
})
export class ProductListComponent {
  pageTitle: string = 'Product List';
}
```

```
// product-list.components.ts

import { Component } from '@angular/core';
@Component({
  selector: 'nat-products',
  templateUrl: 'app/products/product-
list.component.html'
})
export class ProductListComponent {
  pageTitle: string = 'Product List';
}
```



Angular Built-in Directives

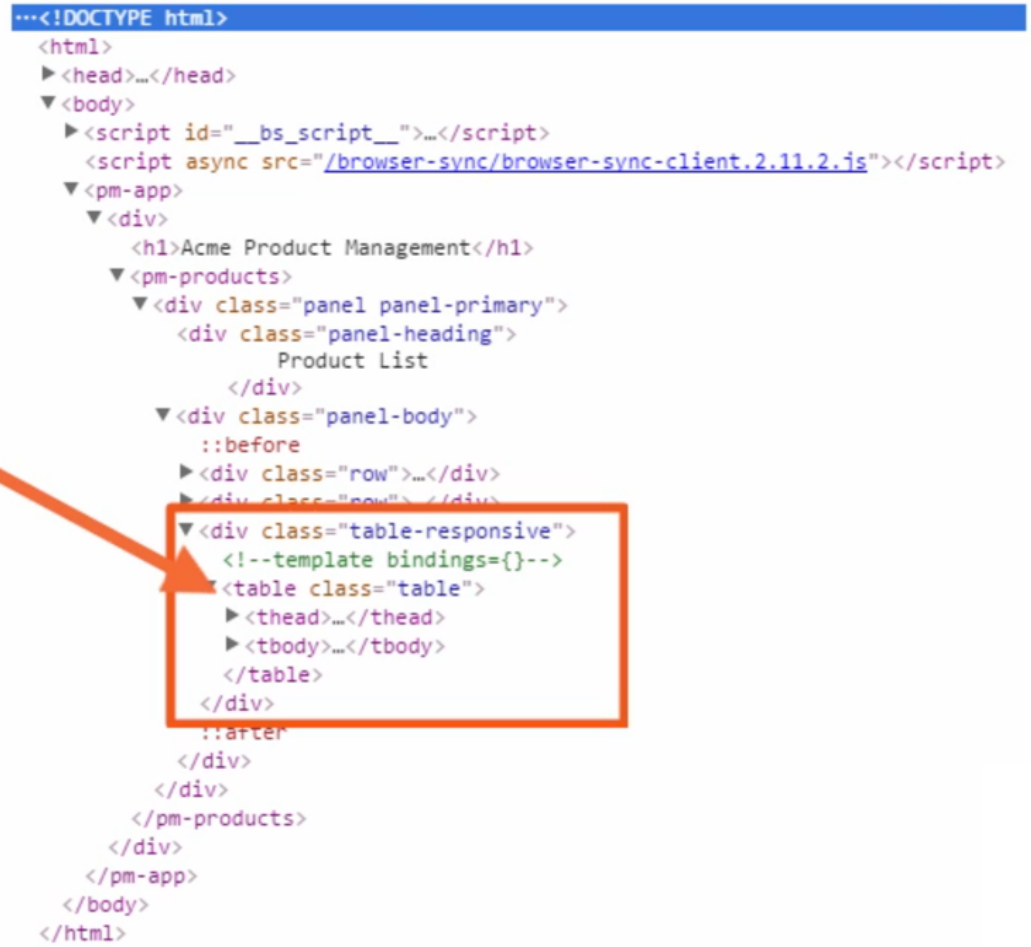


*ngIf Built-In Directive

```
<div class='table-responsive'>
 <table class='table' *ngIf='products && products.length'>
  <thead> ...
  </thead>
  <tbody> ...
  </tbody>
 </table>
</div>
```

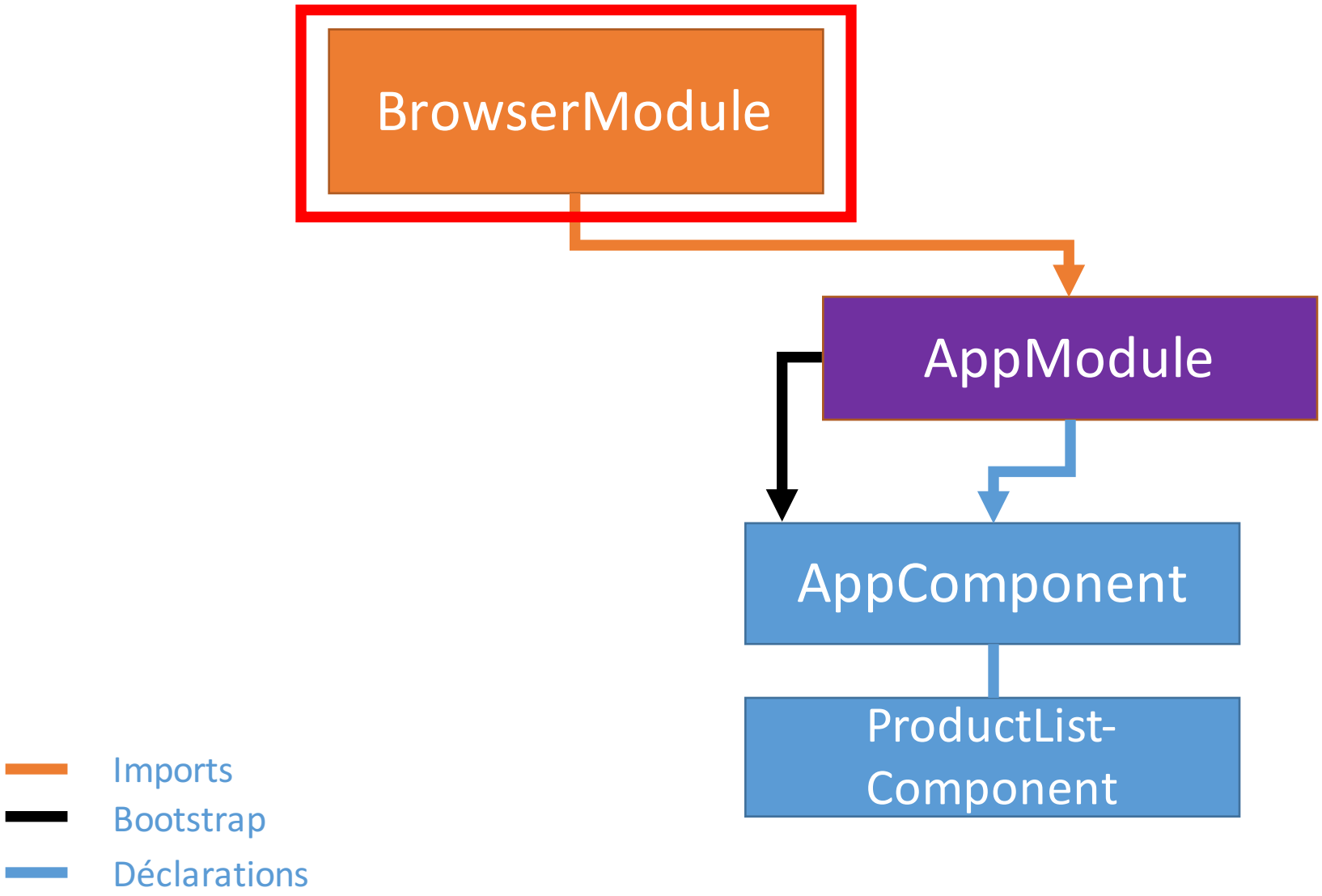
*ngIf Built-In Directive

```
<div class='table-responsive'>
 <table class='table' *ngIf='products && products.length'>
  <thead> . . .
  </thead>
  <tbody> ...
  </tbody>
 </table>
</div>
```



*ngIf Built-In Directive

```
<div class='table-responsive'>
  <table class='table' *ngIf='products && products.length'>
    <thead> ...
    </thead>
    <tbody> ...
    </tbody>
  </table>
</div>
```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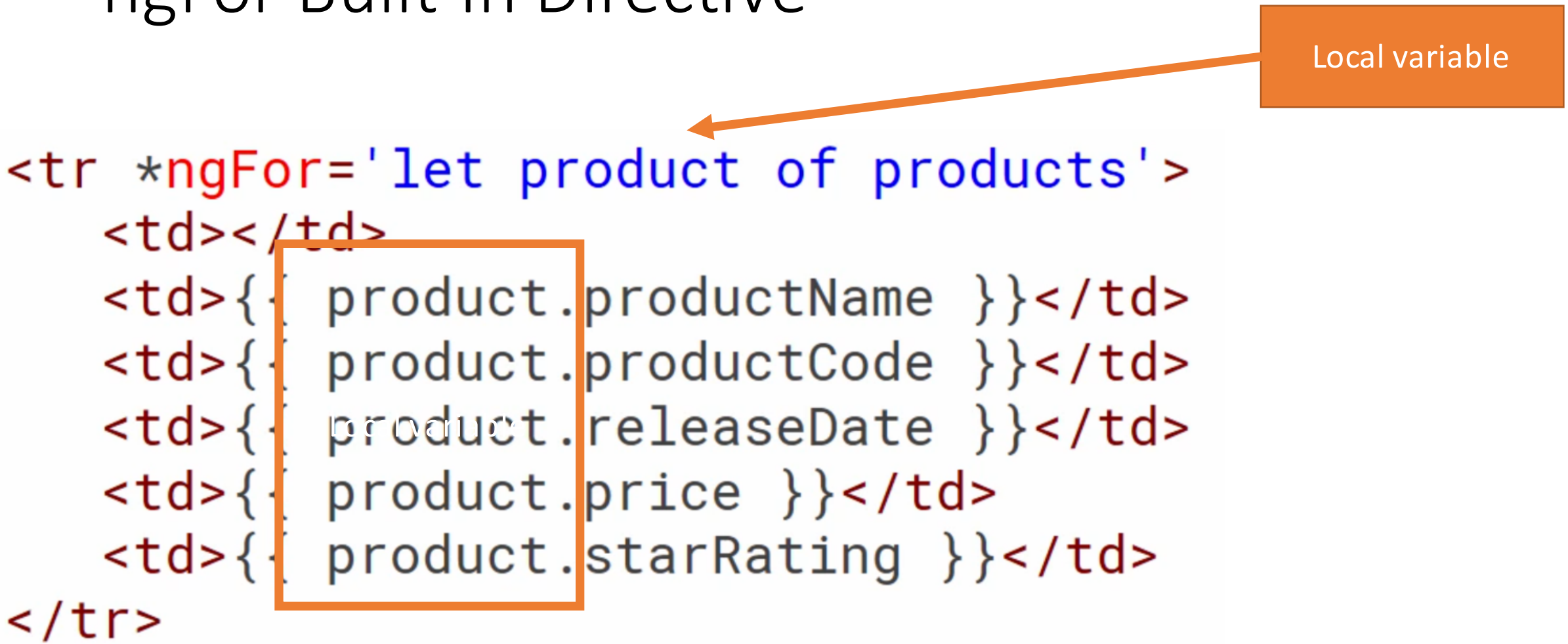
*ngFor Built-In Directive

```
<tr *ngFor='let product of products'>
    <td></td>
    <td>{{ product.productName }}</td>
    <td>{{ product.productCode }}</td>
    <td>{{ product.releaseDate }}</td>
    <td>{{ product.price }}</td>
    <td>{{ product.starRating }}</td>
</tr>
```

*ngFor Built-In Directive



For...of vs for...in

for...of

- Iterates over iterable objects, such as an array.
- Result: di, boo, punkeye

```
let nicknames= ['di', 'boo', 'punkeye'];

for (let nickname of nicknames) {
  console.log(nickname);
}
```

for...in

- Iterates over the properties of an object.
- Result: 0, 1, 2

```
let nicknames= ['di', 'boo', 'punkeye'];

for (let nickname in nicknames) {
  console.log(nickname);
}
```

Checklist: Template

- ✓ Inline template
  - ✓ For short templates
  - ✓ Specify the template property
  - ✓ Use the ES2015 back ticks for multiple lines
  - ✓ Watch syntax
- ✓ Linked template
  - ✓ For longer template
  - ✓ Specify the templateUrl property
  - ✓ Define the path to the HTML file

Checklist: Interpolation

- ✓ One way binding
  - ✓ From component class property to an element property
- ✓ Defined with double curly braces
  - ✓ Contains a template expression
  - ✓ No quote needed

Checklist: Structural Directives

- ✓ *ngIf and *ngFor
  - ✓ Prefix with an asterisk
  - ✓ Assign to a quoted string expression
- ✓ *ngIf
  - ✓ Expression is evaluated as a boolean value
- ✓ *ngFor
  - ✓ Define the local variable with let
  - ✓ Specify 'of': 'let product of products'

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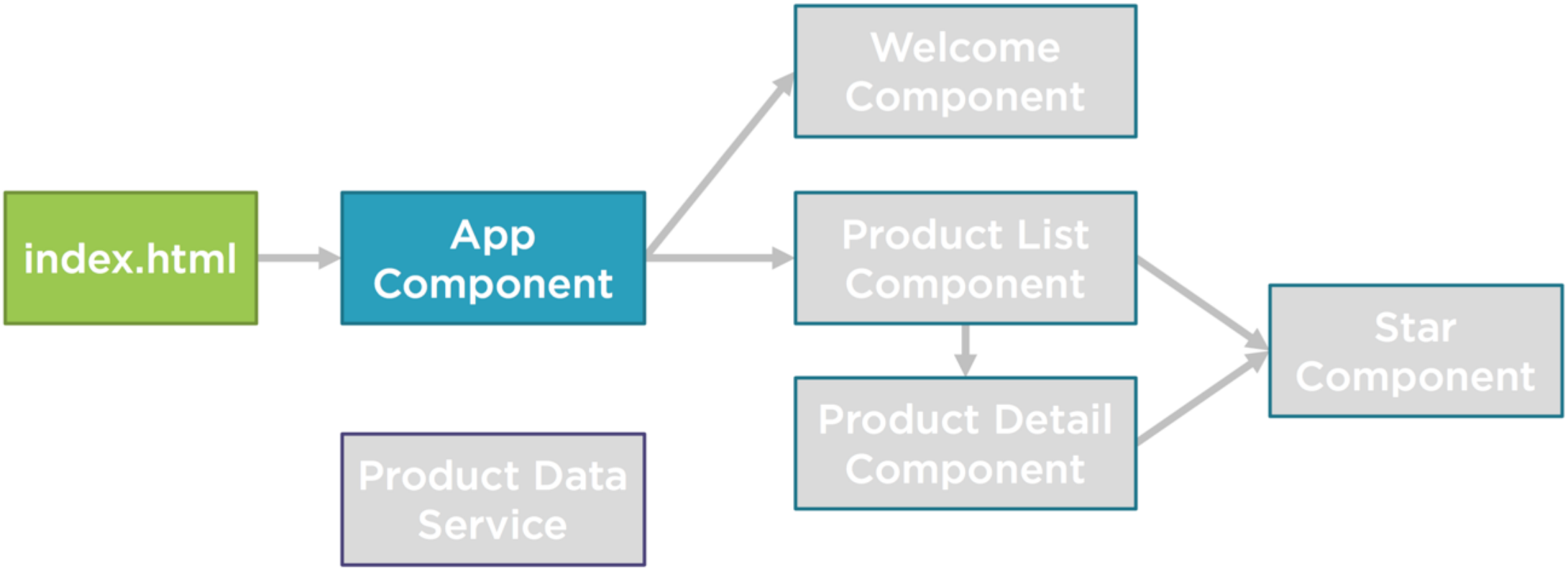
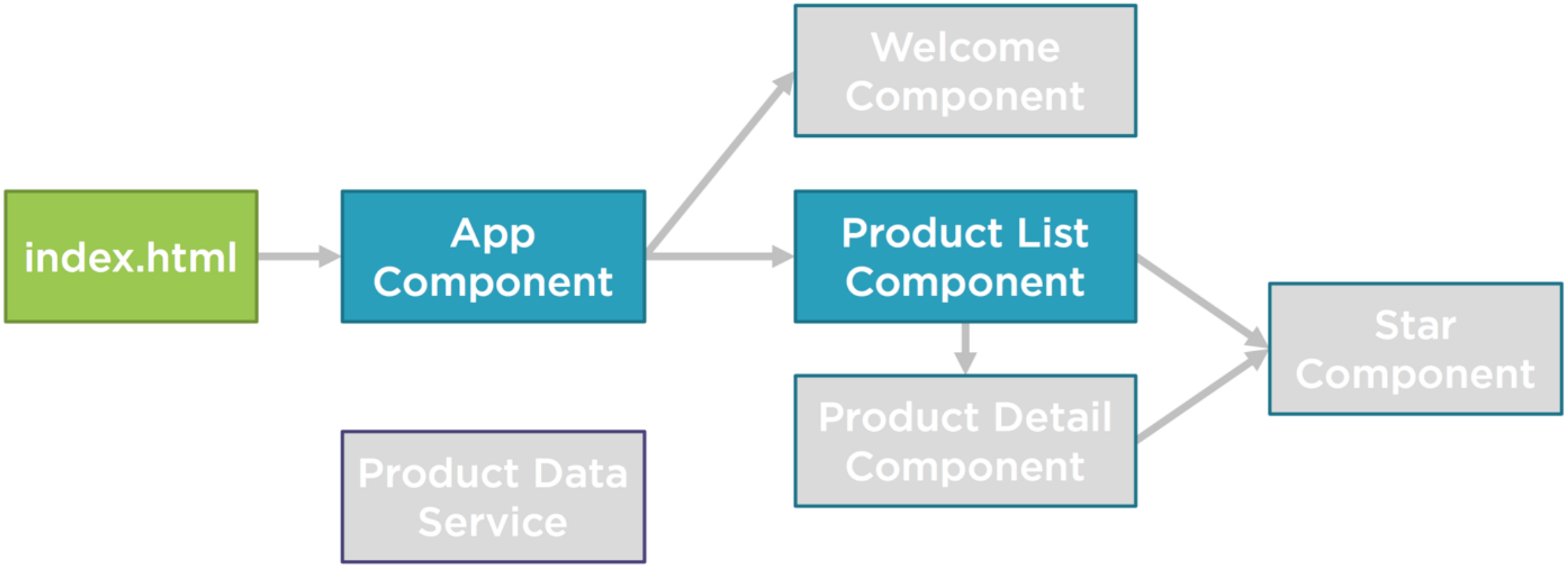
Application Architecture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