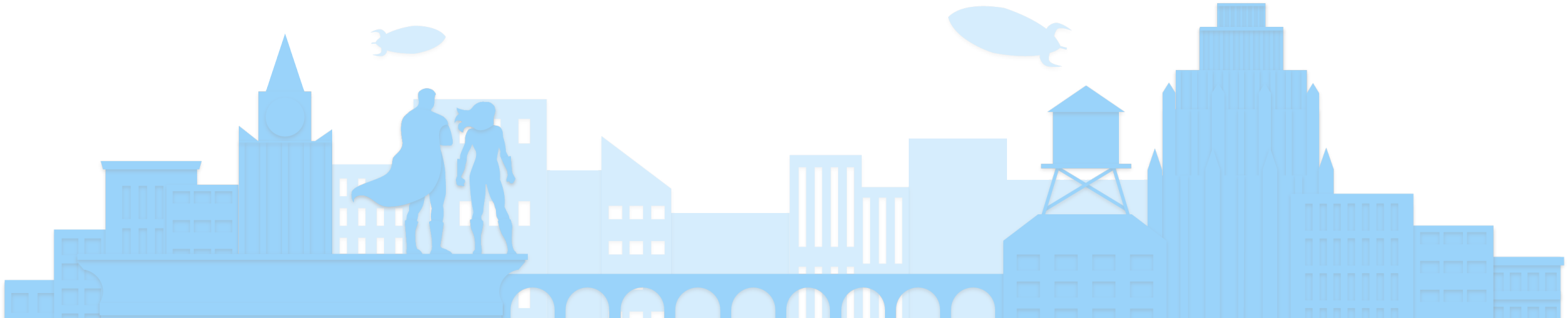
Benjamin Longearet

Angular

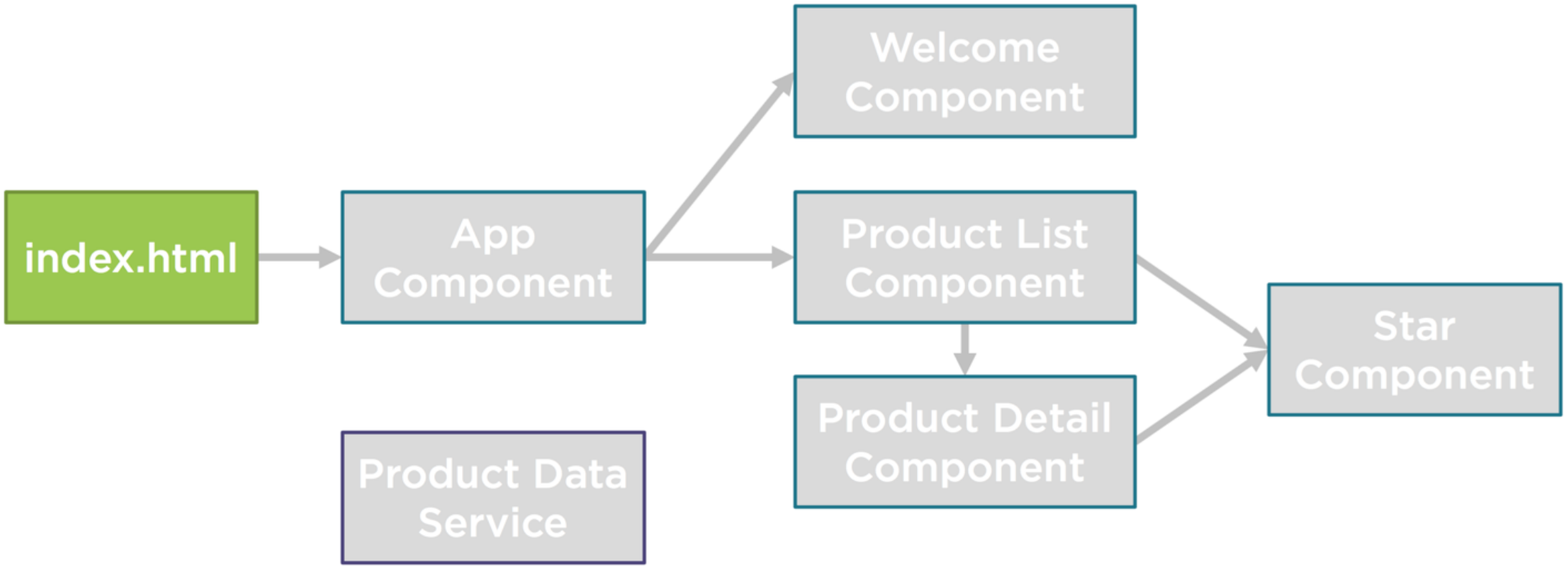
Introduction to component



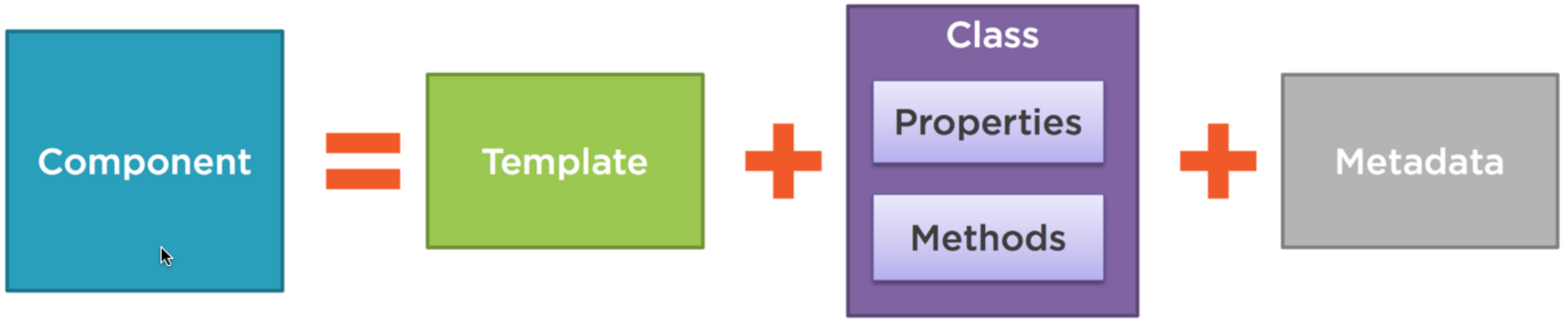
Module Overview

- What Is a Component?
- Creating the Component Class
- Defining the Metadata with a Decorator
- Importing What We Need
- Bootstrapping Our App Component

Application Architecture



What is a Component



- View layout
- Created with HTML
- Includes binding and directives

- Code supporting the view
- Created with TypeScript
- Properties: data
- Methods: logic

- Extra data for Angular
- Defined with a decorator

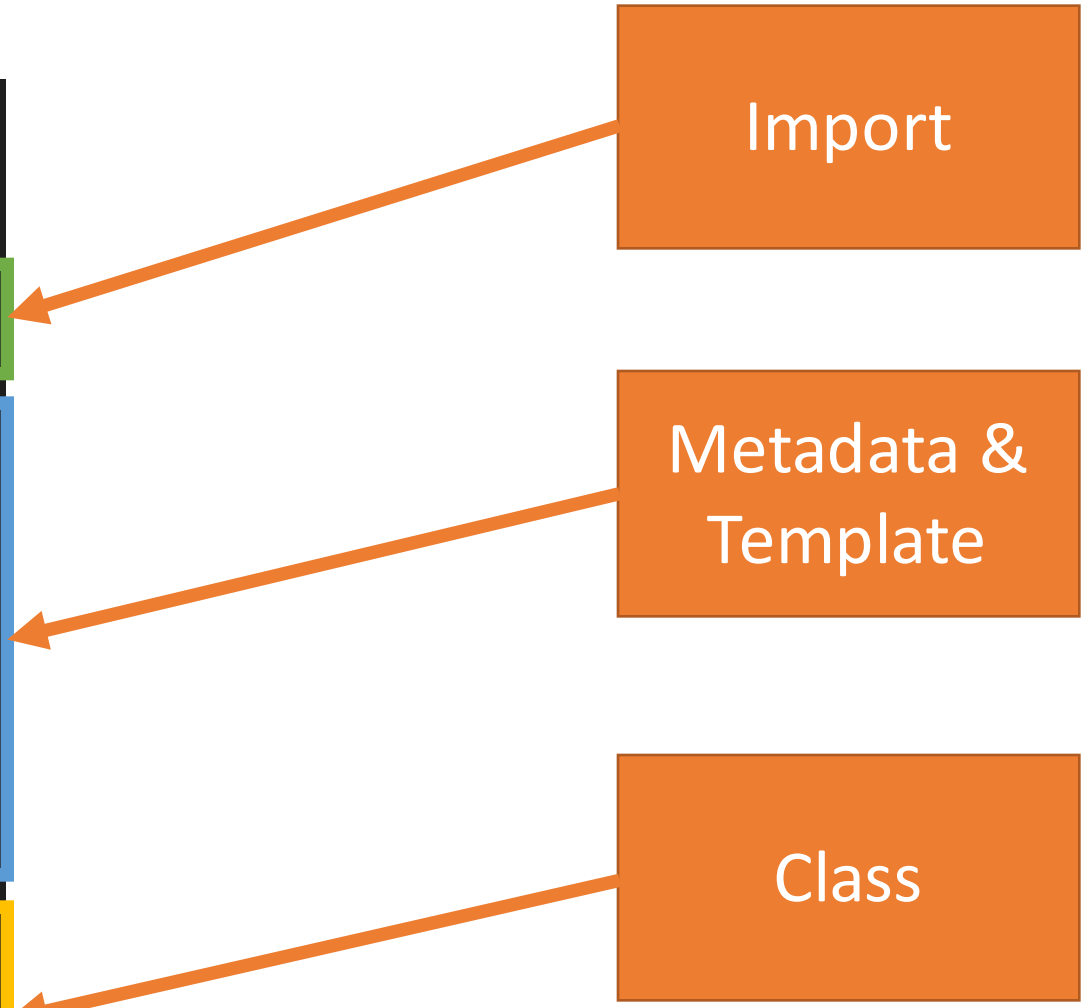
Component

```
// app.component.ts

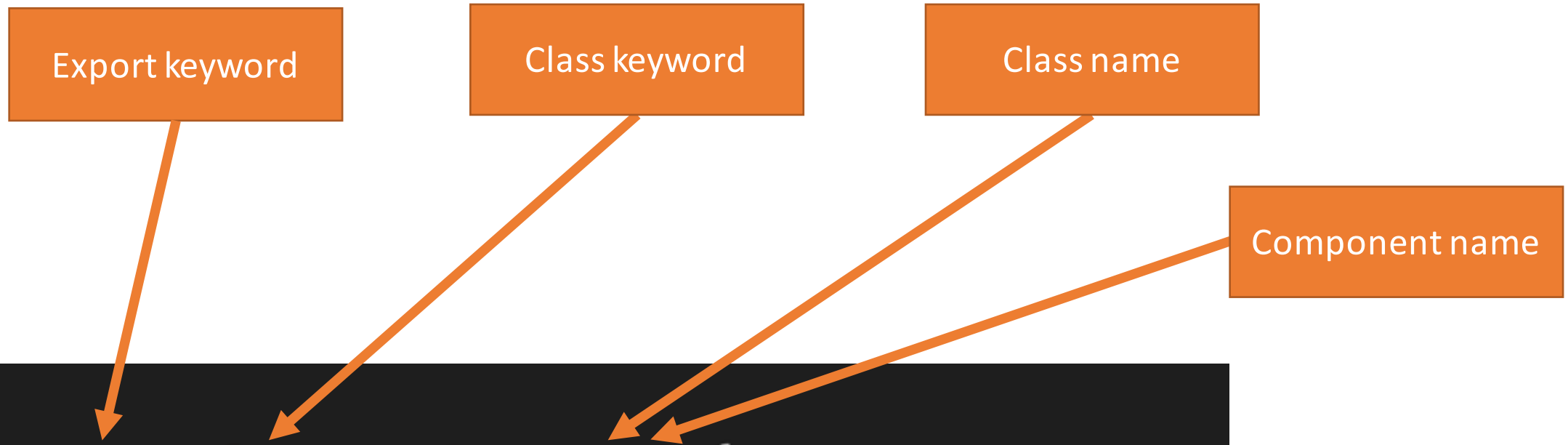
import { Component } from '@angular/core';

@Component({
    selector: 'nat-app',
    template: `
        <h1>Angular2: Let's do it!</h1>
    `
})

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



1. Creating the Component

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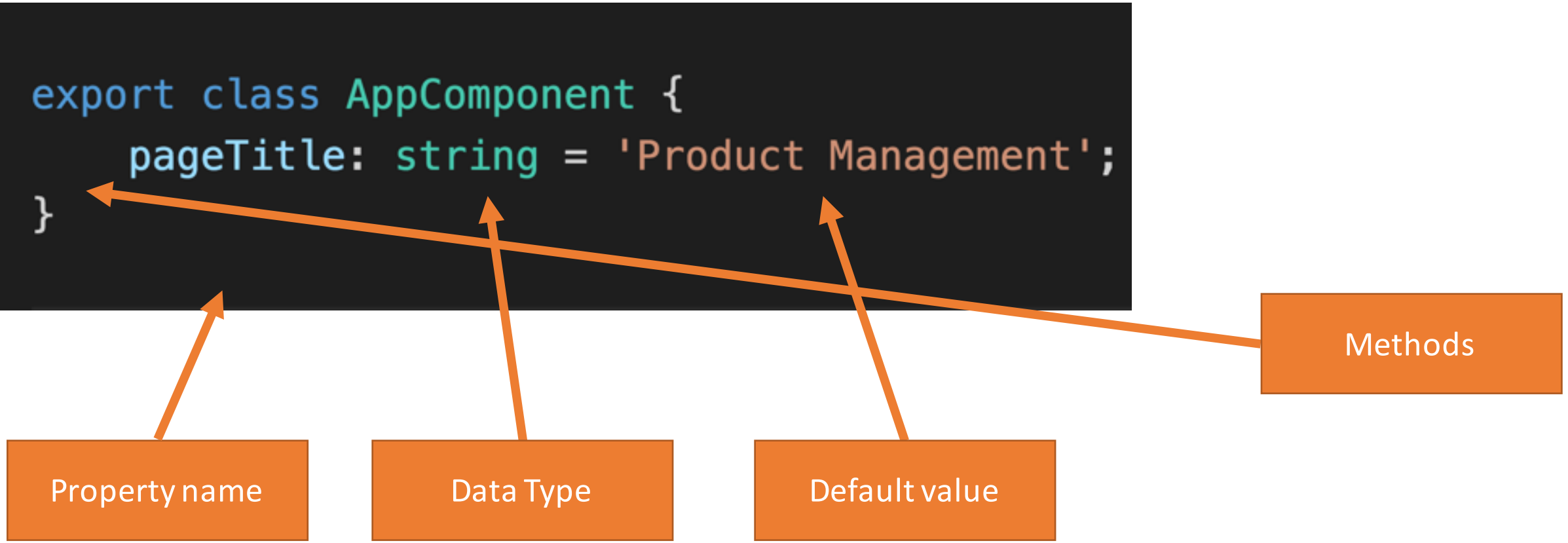

2. Defining the Metadata

```
@Component({
    selector: 'nat-app',
    template: `
        <h1>Angular2: Let's do it!</h1>
    `
})
```

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

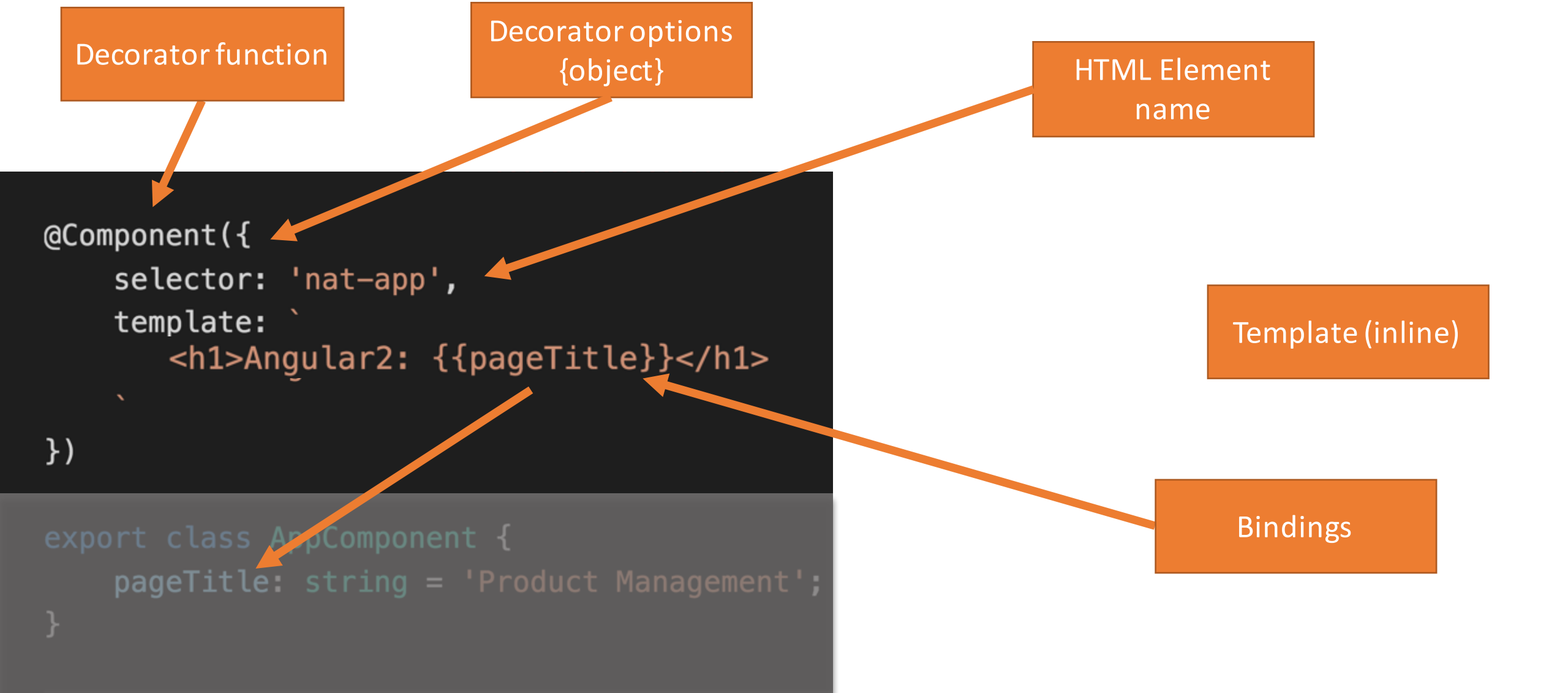
Decorator

- A function that adds **metadata** to a class, its members, or its method arguments.
- Prefixed with an @.
- Angular provides built-in decorators.

@Component()

https://angular.io/api/core/Component

2. Defining the Metadata



3. Importing what we need

- Before we use an external function or class, we define where to find it
- import statement
- import allows us to use exported members from external ES modules
- Import from a third-party library, our own ES modules, or from Angular

Angular is Modular

@angular/core

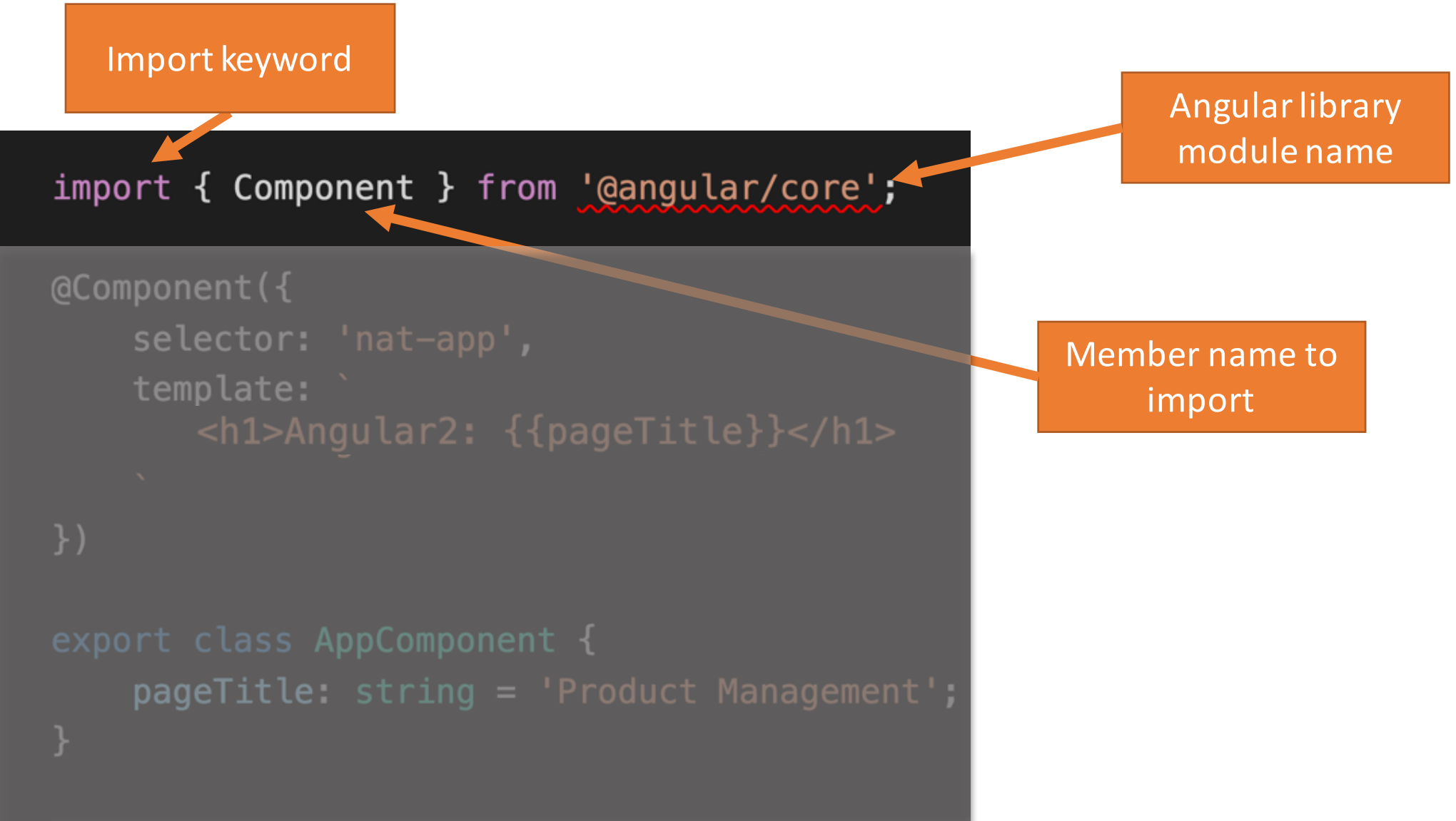
@angular/forms

@angular/http

@angular/router

https://www.npmjs.com/~angular

3. Importing what we need



Completed 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';
}
```

Demo time!

Bootstrapping Our App Component

- Load the root component (bootstrapping)
- Host the application

Single Page Application (SPA)

- index.html contains the main page for the application
- This is often the only Web page of the application
- Hence an Angular application is often called a Single Page Application (SPA)

Hosting the application

```
<!-- index.html -->

<body>
    <nat-app></nat-app>
    Product Manager Application starter files
</body>
```

```
// app.component.ts

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

@Component({
    selector: 'nat-app',
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    `
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}
```

Angular Application Startup

```
<!-- index.html -->
<body>
    <nat-app></nat-app>
    Product Manager Application starter files
</body>
```

```
// main.ts
import { platformBrowserDynamic } from
'@angular/platform-browser-dynamic';
import { AppModule } from './app.module';

platformBrowserDynamic()
    .bootstrapModule(AppModule);
```

```
// app.module.ts
import { NgModule } from '@angular/core';
import { BrowserModule } from
'@angular/platform-browser';

import { AppComponent }  from
'./app.component';

@NgModule({
  imports: [ BrowserModule ],
  declarations: [ AppComponent ],
  bootstrap: [ AppComponent ]
})
export class AppModule { }
```

```
// app.component.ts

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

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export class AppComponent {
    pageTitle: string = 'Product Management';
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Demo time: bootstrapping the App component!

Component Checklist

- ✓Class → Code
- ✓Decorator → Metadata
- ✓Import what we need

Component Checklist: Class

- ✓ Clear name
  - ✓ Use PascalCasing
  - ✓ Append "Component" to the name
- ✓ Export keyword
- ✓ Data in properties
  - ✓ Appropriate data type
  - ✓ Appropriate default value
  - ✓ camelCase with first letter lowercase
- ✓ Logic in methods
  - ✓ camelCase with first letter lowercase

Component Checklist: Class

- ✓ Clear name
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Component Checklist: Metadata

- ✓ Component decorator
  - ✓ Prefix with @; Suffix with ();
- ✓ selector: Component name in HTML
  - ✓ Prefix for clarity
- ✓ template: View’s HTML
  - ✓ Correct HTML syntax

Component Checklist: Import

- ✓ Defines where to find the members that this component needs
- ✓ import keyword
- ✓ Member name
  - ✓ Correct spelling/casing
- ✓ Module path
  - ✓ Enclose in quotes
  - ✓ correct spelling/casing

Something Wrong! Checklist

- ✓ F12 is your friend (devTool)
- ✓ Recheck your code
  - ✓ HTML
    - ✓ Close tags
    - ✓ Angular directives are case sensitive
  - ✓ TypeScript
    - ✓ Close braces
    - ✓ TypeScript is case sensitive

Summary

- What Is a Component?
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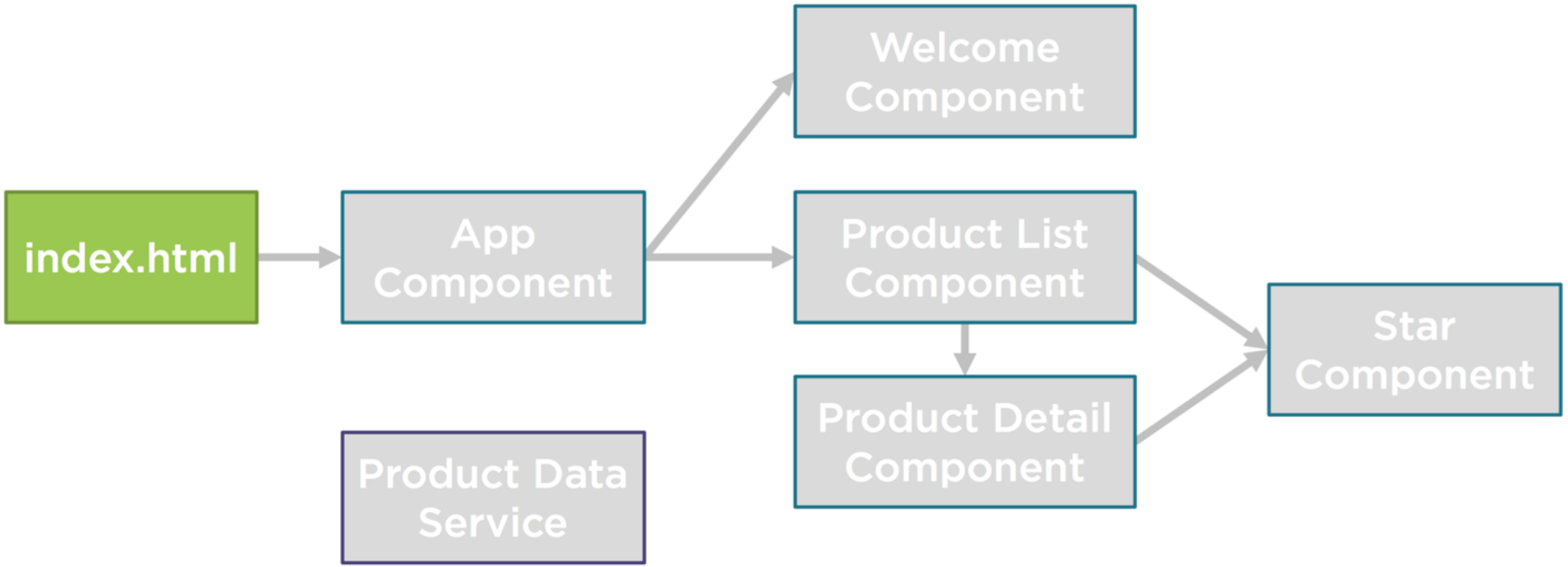
Application Architecture



Application Architecture