

# First Things First

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# Module Overview



**Introduce TypeScript**

**Install what we need**

**Set up and run our Angular application**

**Create an Angular application with the Angular CLI**

TypeScript  
is the programming language  
we use  
when building  
Angular applications

# JavaScript



**The language for the Web**

**ECMAScript (ES)**

**ES 3/5**

**ES 2015 (formerly known as ES 6)**

- Classes**
- Arrow functions**

**Newer JavaScript transpiled to older JavaScript**

# TypeScript



**Open-source language**

**Superset of JavaScript**

**Transpiles to plain JavaScript**

**Strongly typed**

**Class-based object-orientation**

# Learning More



**TypeScript Playground**

<https://www.typescriptlang.org/play>

**Pluralsight Course**

**"TypeScript: Getting Started"**

# Installing What We Need

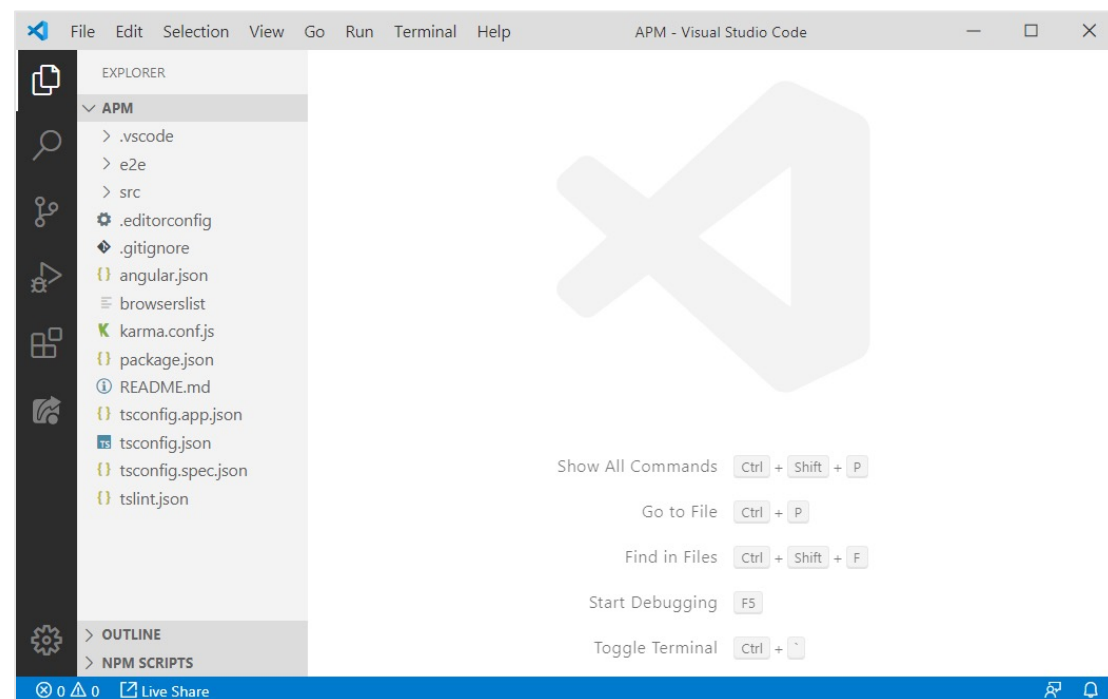


## Editor

- Visual Studio (VS) Code



# VS Code



**Created by Microsoft**

**Runs in Linux, Windows, and OS X**

**Has numerous features that support TypeScript**

- **Auto-completion**
- **Intellisense**
- **Syntax checking**
- **Refactorings**

**It's FREE**

# Visual Studio Code

The image shows the Visual Studio Code website on the left and a screenshot of the Visual Studio Code application interface on the right.

**Visual Studio Code Website:**

- Header: Visual Studio Code, Docs, Updates, Blog, API, Extensions, FAQ, Learn, Search Docs, Download.
- Main Text: Code editing. Redefined. Free. Built on open source. Runs everywhere.
- Operating System Download Links:
  - Windows: Windows 7, 8, 10
  - Linux: .deb (Debian, Ubuntu), .rpm (Red Hat, Fedora, CentOS)
  - OS X: OS X Yosemite, El Capitan
- Footer: By using VS Code, you agree to its [license and privacy statement](#).

**Visual Studio Code Application Interface:**

- File Explorer: Extensions: Marketplace. Search: @sort:installs.
- Extension List:
  - Python: 2019.6.24221, 54.9M, 4.5 stars, Install.
  - GitLens — Git supercharge: 9.8.5, 23.1M, 5 stars, Install.
  - C/C++: 0.24.0, 23M, 3.5 stars, Install.
  - ESLint: 1.9.0, 21.9M, 4.5 stars, Install.
  - Debugger for Chrome: 4.11.6, 20.6M, 4 stars, Install.
  - Language Support for Java: 0.47.0, 18.7M, 4.5 stars, Install.
  - vscode-icons: 8.8.0, 17.2M, 5 stars, Install.
  - Vetur: 0.21.1, 17M, 4.5 stars, Install.
  - C#: 1.21.0, 15.6M, 4 stars, Install.
- Code Editor: JS serviceWorker.js. Content includes:

```
src > JS serviceWorker.js > register > window.addEventListener("load") callback
39
40
41     checkValidServiceWorker(swUrl, config);
42
43     // Add some additional logging to localhost, pointing
44     // service worker/PWA documentation.
45     navigator.serviceWorker.ready.then(() => {
46         product
47         productSub
48         removeSiteSpecificTrackingException
49         removeWebWideTrackingException
50         requestMediaKeySystemAccess
51         sendBeacon
52         serviceWorker (property) Navigator.serviceWorker...
53         storage
54         storeSiteSpecificTrackingException
55         storeWebWideTrackingException
56         userAgent
57         vendor
58     })
59
60 function registerValidSW(swUrl, config) {
61     navigator.serviceWorker
62         .register(swUrl)
63         .then(registration => {
```
- Terminal: 1: node. Output: You can now view create-react-app in the browser. Local: http://localhost:3000/. On Your Network: http://10.211.55.3:3000/. Note that the development build is not optimized.

<https://code.visualstudio.com/>



# Learning More



**Visual Studio Code Site**

**<https://code.visualstudio.com/>**

**Pluralsight Course**

**"Visual Studio Code"**

# Installing What We Need



✓ Editor  
– VS Code



# Installing What We Need



**Editor**

– VS Code

**npm**

– Node package manager

# npm

Angular  
TypeScript  
Bootstrap  
etc...

Open-source  
repository

Command-line utility for  
interacting with the repository

```
Command Prompt
Microsoft Windows [Version 10.0.18362.720]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Deborah>npm install abc_

Directory of C:\Users\Deborah

02/07/2020  05:58 PM    <DIR>          newv9app
03/25/2020  04:53 PM    <DIR>          node_modules
01/04/2019  05:33 PM    <DIR>          .nuget
              0 File(s)              0 bytes
              3 Dir(s)  1,371,293,900,800 bytes free

C:\Users\Deborah>
```



# npm



**Installs libraries, packages, and applications**

**Executes scripts**

**<https://nodejs.org/en/download>**

# Installing What We Need



**Editor**

– VS Code



**npm**

– Node package manager



# What Else Do We Need?



## Angular

- Framework and libraries

## Angular CLI

- Command line interface for Angular

## TypeScript

- Programming language

Testing tools, linters, etc.

# package.json

## dependencies

- Packages required for development and deployment

## devDependencies

- Packages only required for development

```
13 "dependencies": {
14   "@angular/animations": "~11.2.0",
15   "@angular/common": "~11.2.0",
16   "@angular/compiler": "~11.2.0",
17   "@angular/core": "~11.2.0",
18   "@angular/forms": "~11.2.0",
19   "@angular/platform-browser": "~11.2.0",
20   "@angular/platform-browser-dynamic": "~11.2.0",
21   "@angular/router": "~11.2.0",
22   "rxjs": "~6.6.0",
23   "tslib": "^2.0.0",
24   "zone.js": "~0.11.3"
25 },
26 "devDependencies": {
27   "@angular-devkit/build-angular": "~0.1102.0",
28   "@angular/cli": "~11.2.0",
29   "@angular/compiler-cli": "~11.2.0",
30   "@types/jasmine": "~3.6.0",
31   "@types/node": "^12.11.1",
32   "codemaker": "^6.0.0",
33   "jasmine-core": "~3.6.0",
34   "jasmine-spec-reporter": "~5.0.0",
35   "karma": "~6.1.0",
36   "karma-chrome-launcher": "~3.1.0",
37   "karma-coverage": "~2.0.3",
38   "karma-jasmine": "~4.0.0",
39   "karma-jasmine-html-reporter": "^1.5.0",
40   "protractor": "~7.0.0",
41   "ts-node": "~8.3.0",
42   "tslint": "~6.1.0",
43   "typescript": "~4.1.2"
44 }
```

# When Setting Up Existing Angular Code

#1

Navigate down to the project folder

The project folder contains the `package.json` file

#2

Run: `npm install`

To install the packages defined in the `package.json` file

#3

Run: `npm start`

To start the installed Angular application



# Setting up Our Angular Application



**Starter files**

<https://github.com/DeborahK/Angular-GettingStarted>

C:\Users\Deborah\Pluralsight\Angular Getting Started\APM

File

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<div>📁 .vscode</div>	2/9/2021 4:21 PM	File folder	
<div>📁 e2e</div>	2/9/2021 4:21 PM	File folder	
<div>📁 src</div>	2/11/2021 10:31 AM	File folder	
<div>📄 .browserslistrc</div>	1/29/2021 12:01 PM	BROWSERSLISTRC...	1 KB
<div>⚙️ .editorconfig</div>	4/7/2020 9:34 AM	Editor Config Sour...	1 KB
<div>📄 .gitignore</div>	3/4/2020 1:48 PM	Text Document	1 KB
<div>📄 angular.json</div>	1/29/2021 12:13 PM	JSON Source File	4 KB
<div>💰 karma.conf.js</div>	1/29/2021 12:03 PM	JavaScript File	2 KB
<div>📄 package.json</div>	2/11/2021 2:59 PM	JSON Source File	2 KB
<div>📄 README.md</div>	2/11/2021 3:00 PM	Markdown Source...	2 KB
<div>📄 tsconfig.app.json</div>	1/29/2021 12:05 PM	JSON Source File	1 KB
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<div>📄 tsconfig.spec.json</div>	1/29/2021 12:05 PM	JSON Source File	1 KB
<div>📄 tslint.json</div>	1/29/2021 12:12 PM	JSON Source File	4 KB

14 items

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# When Setting Up Existing Angular Code

#1

**Navigate down to the project folder**

**The project folder contains the `package.json` file**

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**Run: `npm start`**

**To start the installed Angular application**



# Demo



**Create an Angular app using the  
Angular CLI**

# Summary



**Introduced TypeScript**

**Installed what we need**

- **Editor (VS Code)**
- **npm (node)**

**Set up and ran our Angular application**

**Used the Angular CLI to create a new Angular application**

# Angular CLI

Global Angular CLI



projects/apm



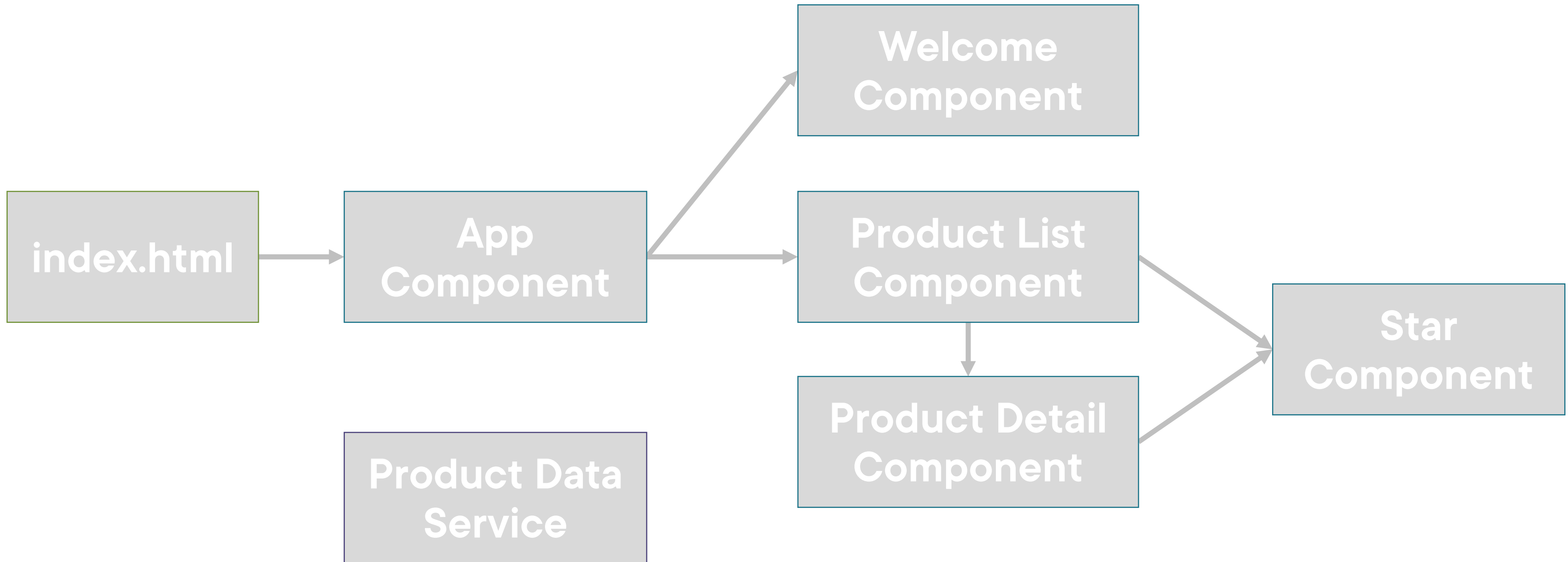
projects/hello-world



projects/cms

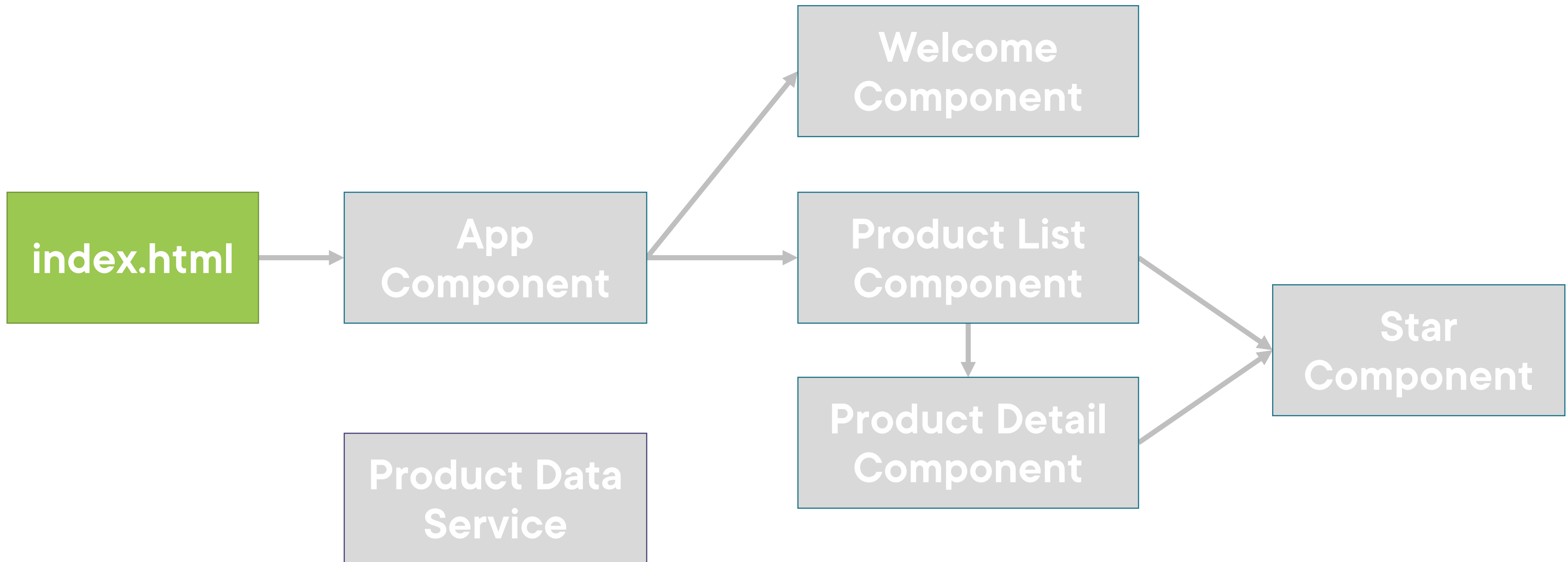


# Application Architecture

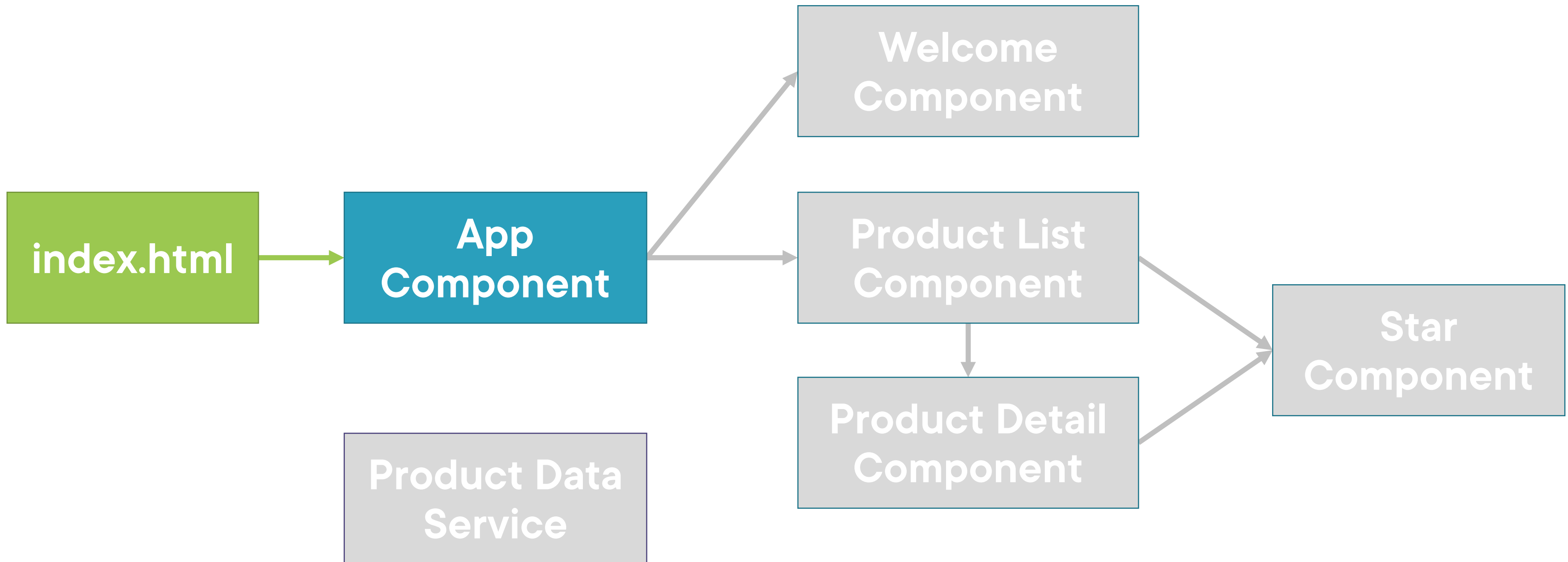




# Application Architecture



# Application Architecture





Coming up next ...

**Introduction to Components**