

# First Things First

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# Module Overview



**Selecting a Language**

**Selecting an Editor**

**Setting up an Angular Application**

**About Modules**



# JavaScript Language Specification

A yellow square containing the letters 'JS' in a large, bold, dark grey sans-serif font.

JS

ECMAScript (ES)

ES 3

ES 5

ES 2015 (formerly known as ES 6)

- Must be transpiled



# Selecting a Language

## ES 5

- Runs in the browser
- No compile required

## ES 2015

- Lots of new features (classes, let, arrow, etc.)

## TypeScript

- Superset of JavaScript
- Strong typing
- Great IDE tooling



# What Is TypeScript?



Open source language

Superset of JavaScript

Transpiles to plain JavaScript

Strongly typed

- TypeScript type definition files (\*.d.ts)

Class-based object-orientation



# Learning More



## TypeScript Playground

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

## Pluralsight Courses

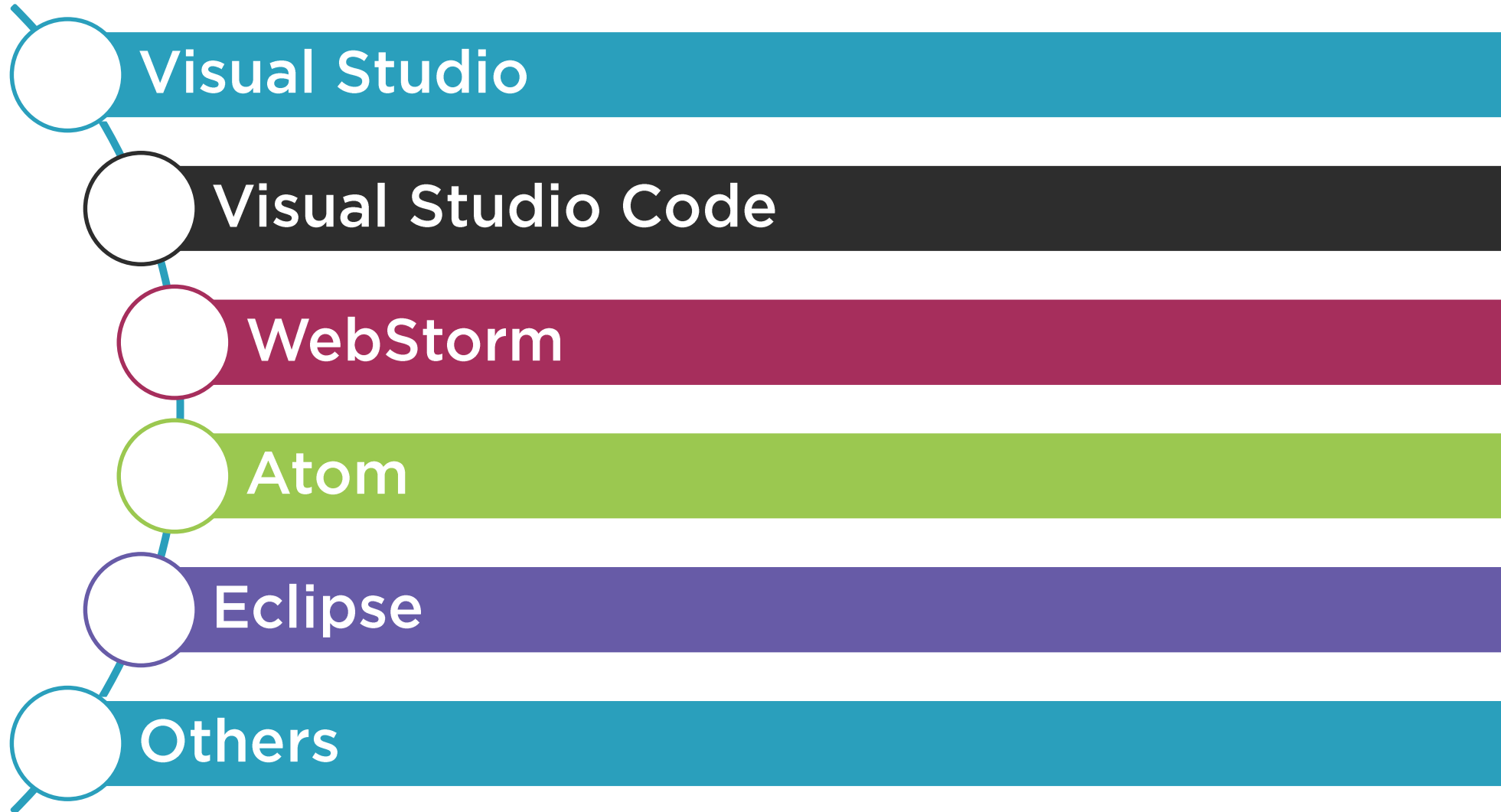
"TypeScript Fundamentals"

"AngularJS with TypeScript"

"Using ES6 with TypeScript"



# TypeScript Editors





# Visual Studio Code

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

**Visual Studio Code Website:**

- Header: Visual Studio Code, Docs, Updates, Blog, Community, Extensions, FAQ, Search Docs, Download.
- Main Text: Code editing. Redefined. Free. Open source. Runs everywhere.
- Download Options: Windows (7, 8, 10), .deb (Debian, Ubuntu), .rpm (Red Hat, Fedora, CentOS), OS X (OS X Yosemite, El Capitan), Zip archive, Zip archive | 32 bit versions.
- Footer: By using VS Code, you agree to its license and privacy statement.

**Visual Studio Code IDE Interface:**

- File Explorer: Extensions, @popular, C# 1.22 (356K stars), Python 0.10.0 (211K stars), Debugger for Chrome (148 stars), C/C++ 0.7.0 (143K stars), Go 0.6.39 (99K stars), ESLint 0.10.0 (88K stars).
- Editor: app.ts, www.ts, package.json, README.md. Code snippet for Express.js server.
- Output: master, 11 131, 0 0 0, Ln 9, Col 21, Spaces: 2, UTF-8, LF, TypeScript.

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



# Learning More



**Visual Studio Code Site**

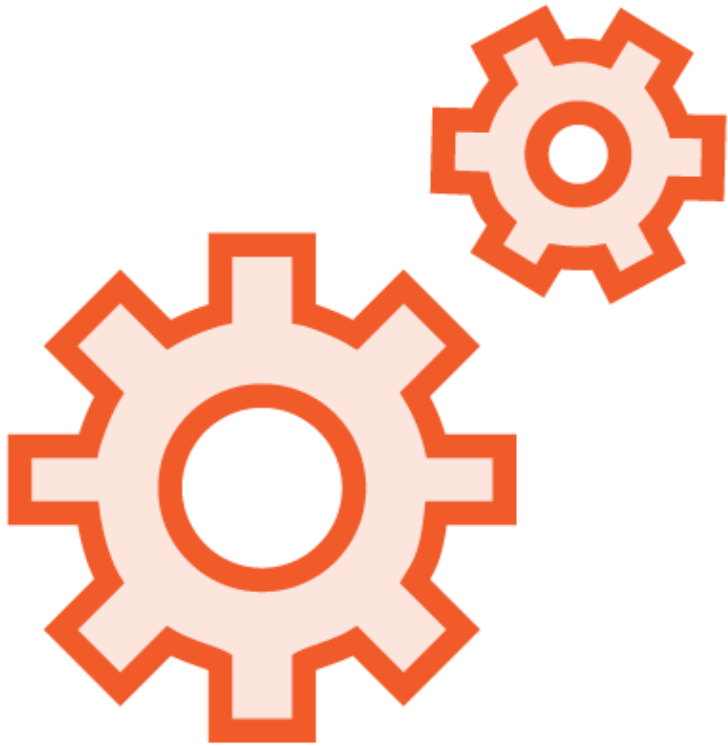
<https://code.visualstudio.com/>

**Pluralsight Course**

"Visual Studio Code"



# Setting up Our Environment



npm

Set up the Angular application



# npm



**Node Package Manager**

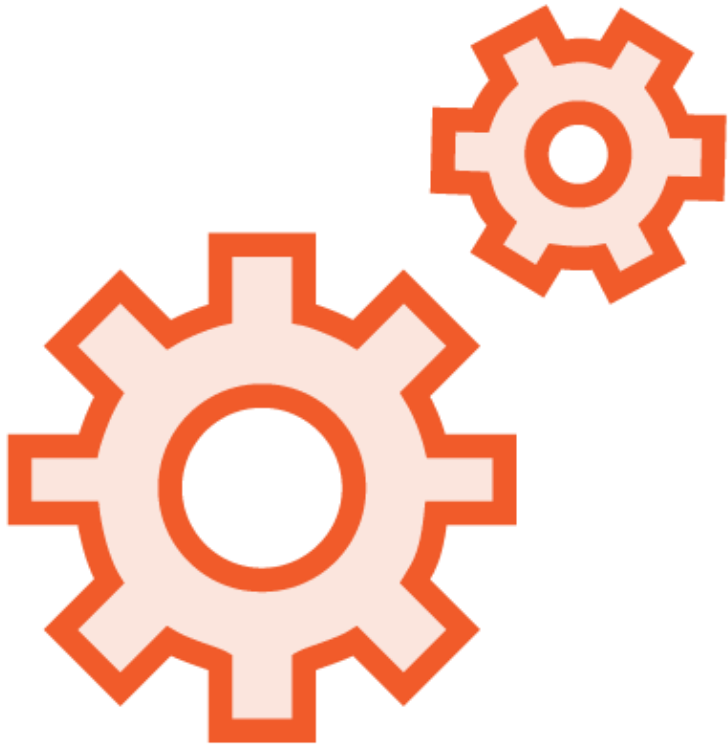
**Command line utility**

**Installs libraries, packages, and applications**

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



# Setting up an Angular Application



1. **Create an application folder**
2. **Add package definition and configuration files**
3. **Install the packages**
4. **Create the app's Angular Module**
5. **Create the main.ts file**
6. **Create the host Web page (index.html)**



# Setting up an Angular Application



**Manually perform each step**

**Angular CLI**

<https://github.com/angular/angular-cli>

**Starter files**

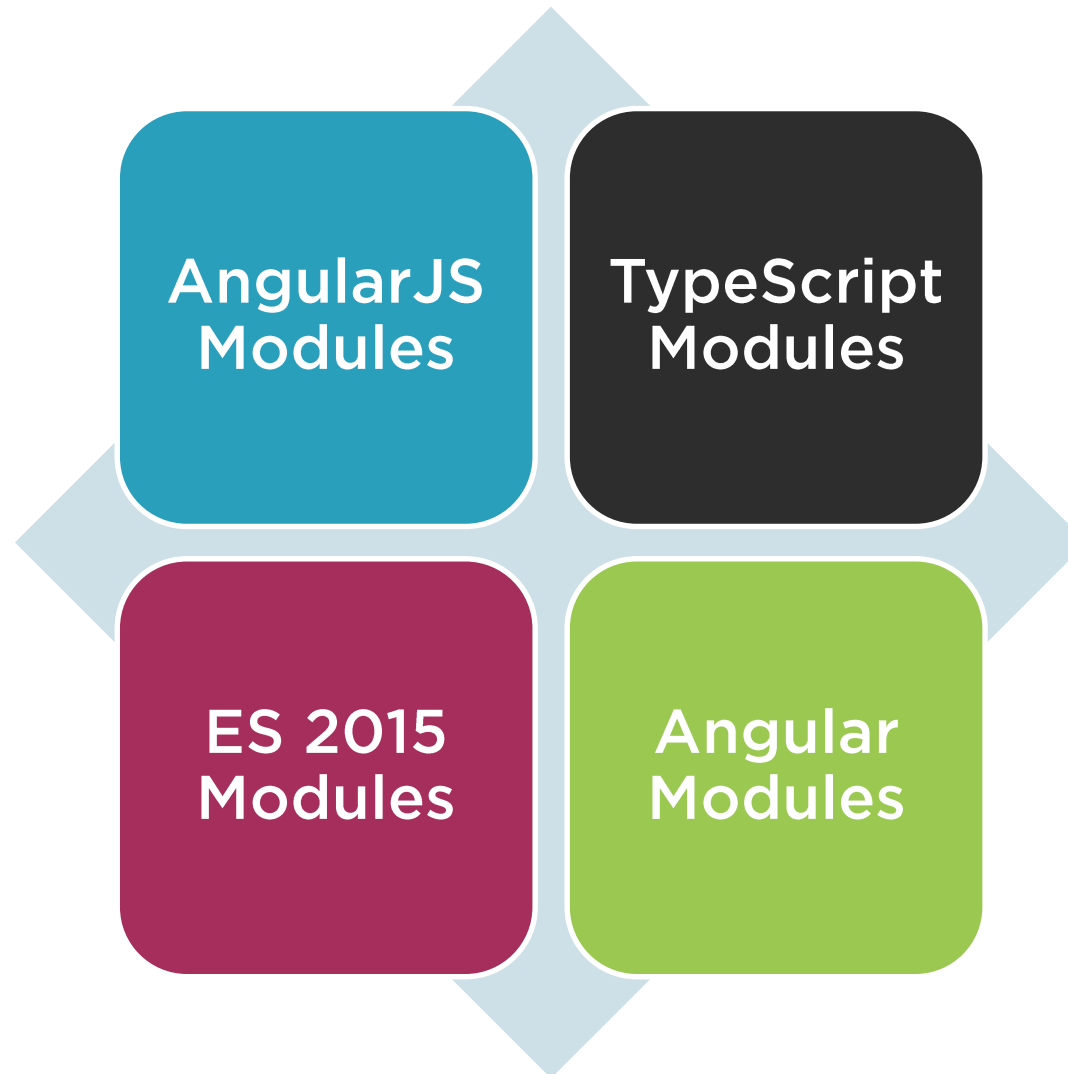
<https://github.com/DeborahK/Angular-GettingStarted>



# Modules

*Namespaces*

*Code Organization*



# ES 2015 Modules

## Export

product.ts

```
export class Product{  
}
```

product.js

```
function Product() {  
}
```



Transpile

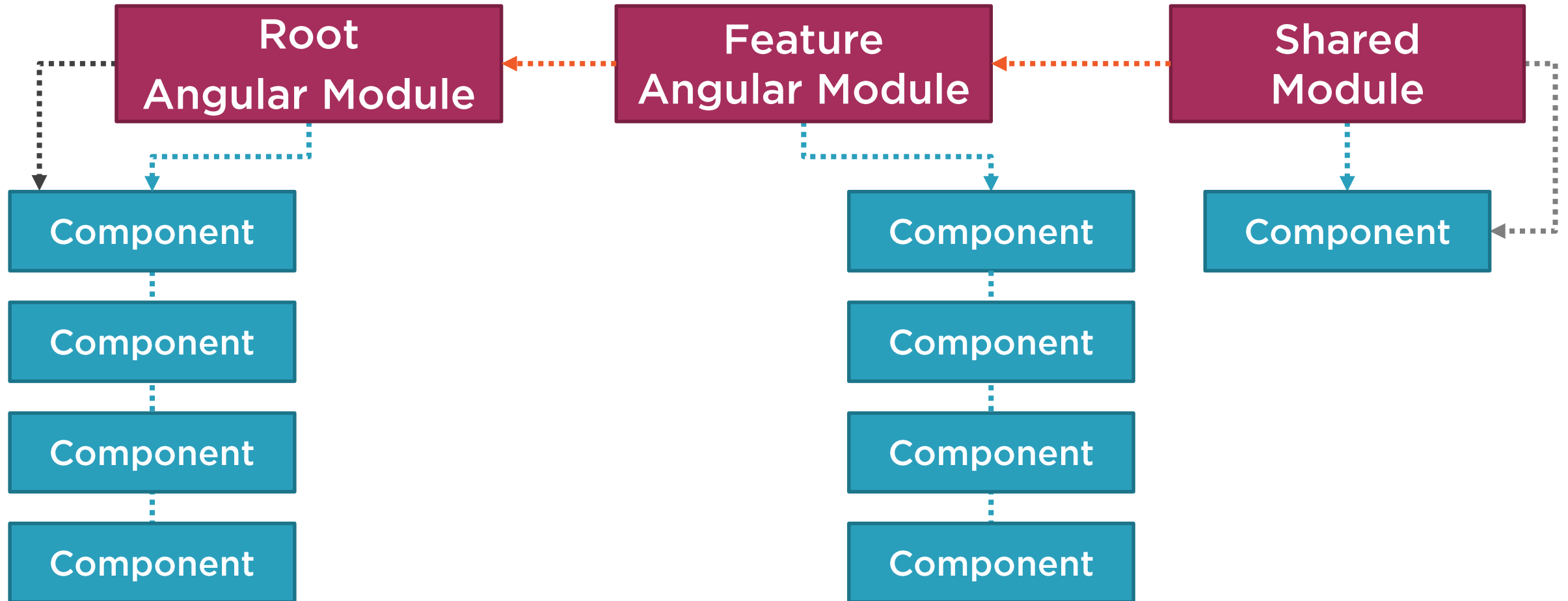
## Import

product-list.ts

```
import { Product } from  
'./product'
```



# Angular Modules



# Modules

## ES Modules

Code files that  
import or export something

Organize our code files

Modularize our code

Promote code reuse

## Angular Modules

Code files that  
organize the application into cohesive  
blocks of functionality

Organize our application

Modularize our application

Promote application boundaries







Web Browser

Web  
Server

URL Request (www.mysite.com)

Response

index.html

JavaScript



# Summary



**Selecting a Language**

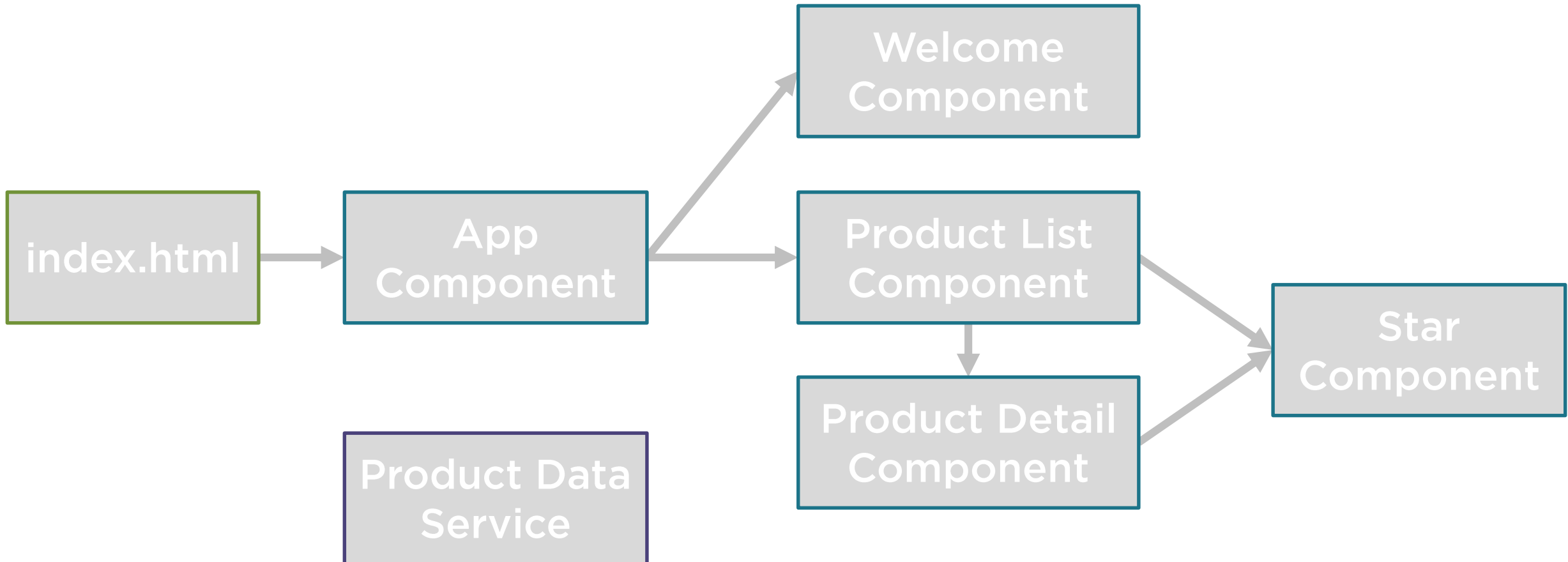
**Selecting an Editor**

**Setting up an Angular Application**

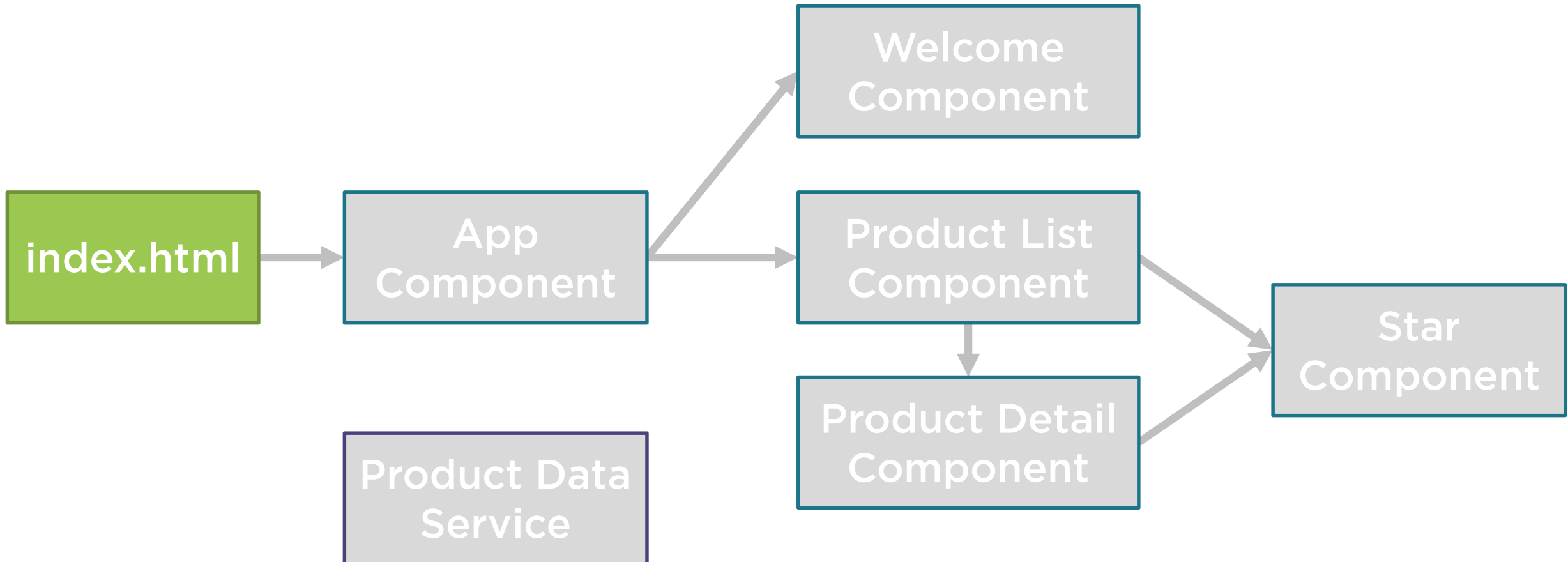
**About Modules**



# Application Architecture



# Application Architecture



# Application Architecture

