

Introduction to Angular JS



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Angular App Fundamentals

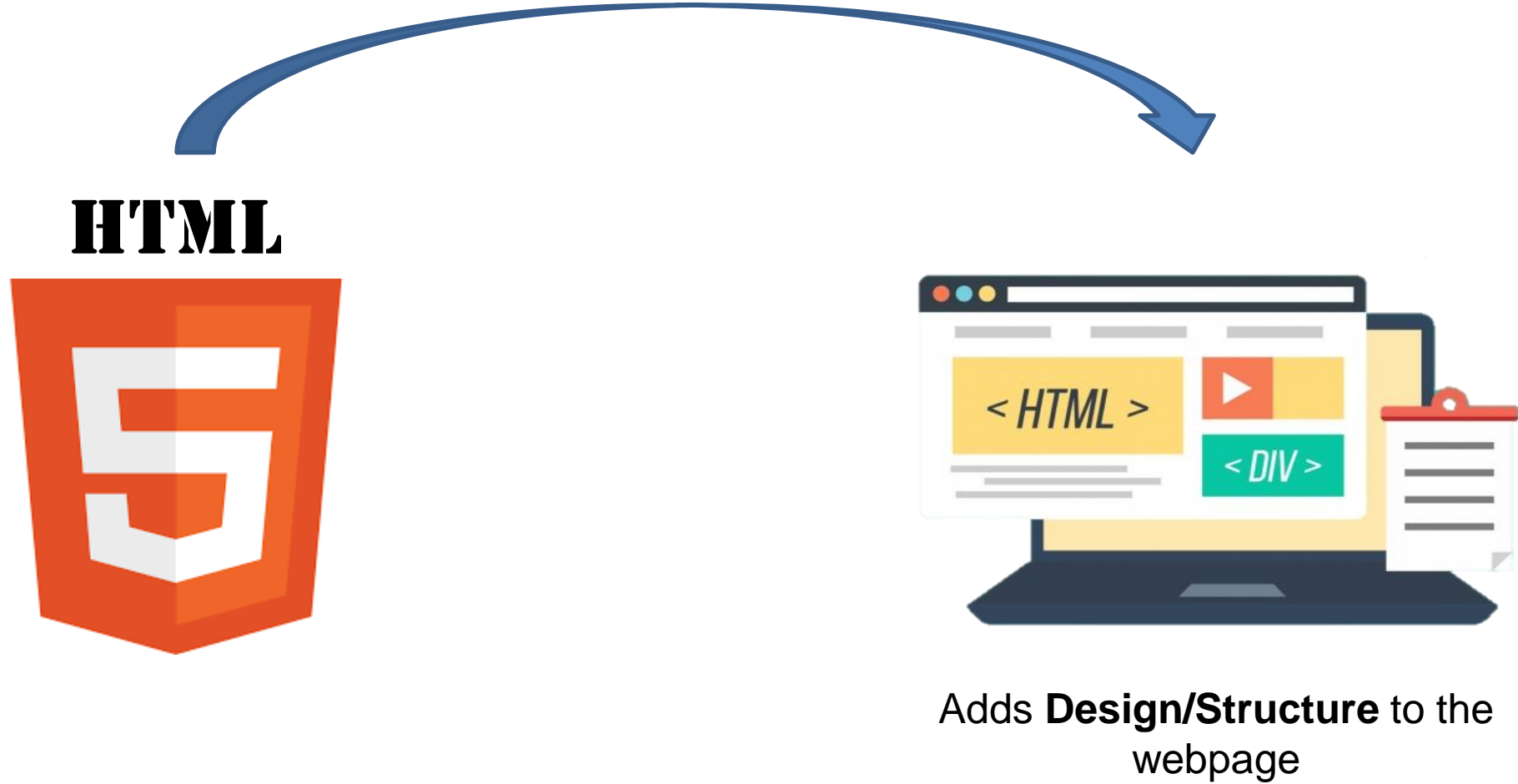
11

Companies using AngularJS

12

Advantages of AngularJS

Prerequisites



What is HTML?

- Stands for HyperText Markup Language
- HyperText: Link between web pages.
- Markup Language: Text between tags which defines structure.
- It is a language to create web pages
- HTML defines how the web page looks and how to display content with the help of elements
- It forms or defines the structure of our Web Page
- Need to save your file with .html extension

HTML Skeleton

<!DOCTYPE html>

<html>

<head>

<title></title>

</head>

<body>

</body>

</html>



Adds **Style/Colors** to the webpage

What is CSS?

- Stands for Cascading Style Sheet.
- It's a stylesheet language used for styling the HTML pages.
- It describes how the page will appear on the screen.
- It can control the layout of multiple webpages at all once.
- It adds styles like fonts, colors, layout to the webpages.
- CSS benefits accessibility primarily by separating document structure from presentation.
- CSS allows precise control over spacing, alignment and positioning.

CSS Syntax

```
<!DOCTYPE html>
<html>
<head>
  <title> </title>
  <style>
    selector1{
      property1:value;
      property2:value;
    }
    selector2{
      property1:value;
    }
  </style>
</head>
<body>
</body>
</html>
```



Adds **Behaviour/Interactivity** to the
webpage

What is JS?

- Stands for JavaScript.
- It's a scripting language used for adding behavior to the webpages.
- It is a verb of the webpage that defines all the actions to be performed on a webpage.
- Its an object oriented programming language that uses JIT compiler.
- It is everywhere and all web browsers are installed with it.
- JS application ranges from web development, mobile development etc.
- JS is easy, simple and very compatible with HTML-CSS

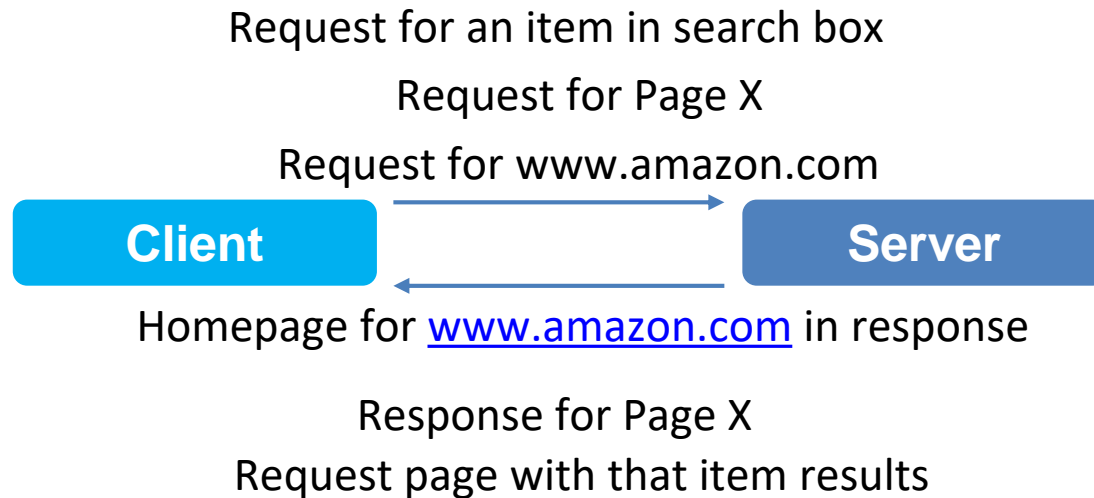
JS Syntax

```
<!DOCTYPE html>
<html>
<head>
    <title> </title>
</head>
<body>
.....
.....
<script>
    document.write("Hello World");
    console.log("Great Learning");
</script>

</body>
</html>
```

What are SPA's?

What are SPAs?



- Multiple page request sent to Server every time we click
- Client page getting loaded again and again.
- Hence, such pages are low on speed

- Single request sent to Server to load the whole application
- Multiple data Requests going to the server, not page.
- Client page doesn't get load again and again.



Introduction to AngularJS

Why AngularJS?

Is JS ideal for SPAs? - “No, only JS is not ideal for SPAs. We have variety of Frameworks and Libraries instead which will make it possible for JS to create SPAs”



What is a Framework?

- Framework is the basic structure
- It helps in easy development
- It provides basic configuration



What is AngularJS?



Angular JS is an open source JavaScript Framework



It is designed for web, desktop and mobile platforms



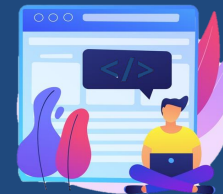
Maintained by Google



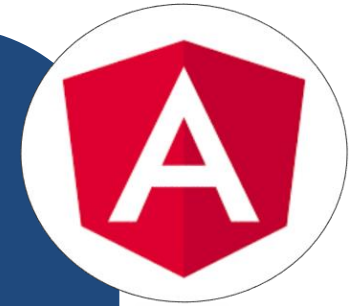
It is completely written in TypeScript



It uses HTML's syntax to express your applications component clearly



Primarily aimed to develop Single Page Applications



Features of AngularJS



Data Binding

Speed and
Performance

Architecture

Dependency Injection

Directives

Deep Linking

Not browser specific

Routing

Code Less

Productivity

MVC Architecture

Ingredients:

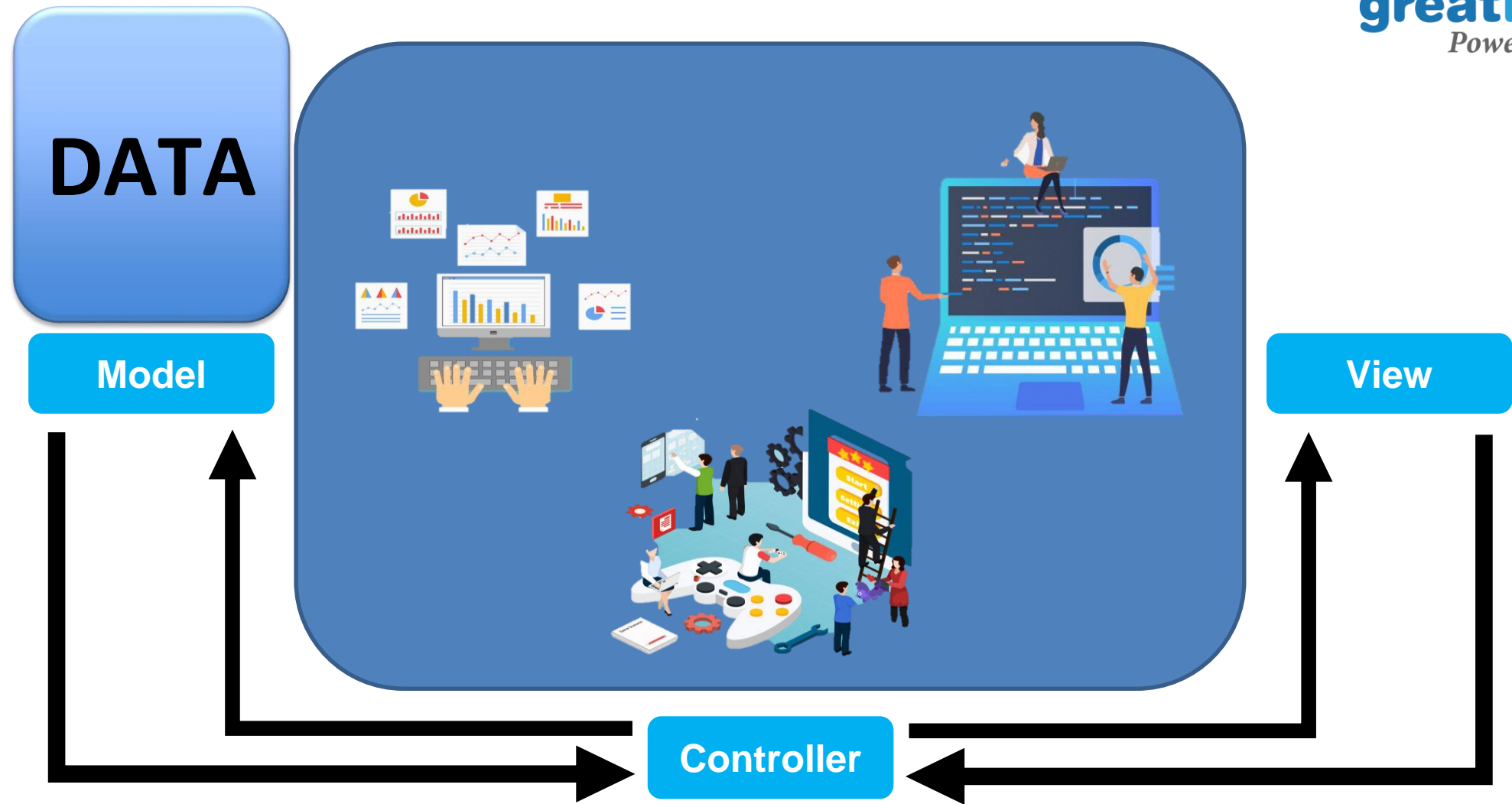
Milk
Tea Leaves
Water
Sugar
Cardamom

Chef



Customer

Waiter



Versions and Transition

Angular JS/Angular 1.X
– aimed to simplify both the development and the testing phase of applications.

Angular 4 – Reduce the size of the code for the components with faster compilation, better bug fixes alert.

Angular 7 – Prompts were introduced which provide tips in CLI. It help discover inbuilt SCSS support, routing.

Angular 9 – This came with new and improved Ivy compiler and runtime, faster testing, better debugging.

Angular 2 – Mobile oriented, It provided more choices for languages from ES5, ES6, TS.

Angular 5,6 – Angular CLI got updated, New commands added like ng-update and ng-add.

Angular 8 – Ivy Compiler introduced, Differential loading of modern JS, Dynamic imports for lazy routes

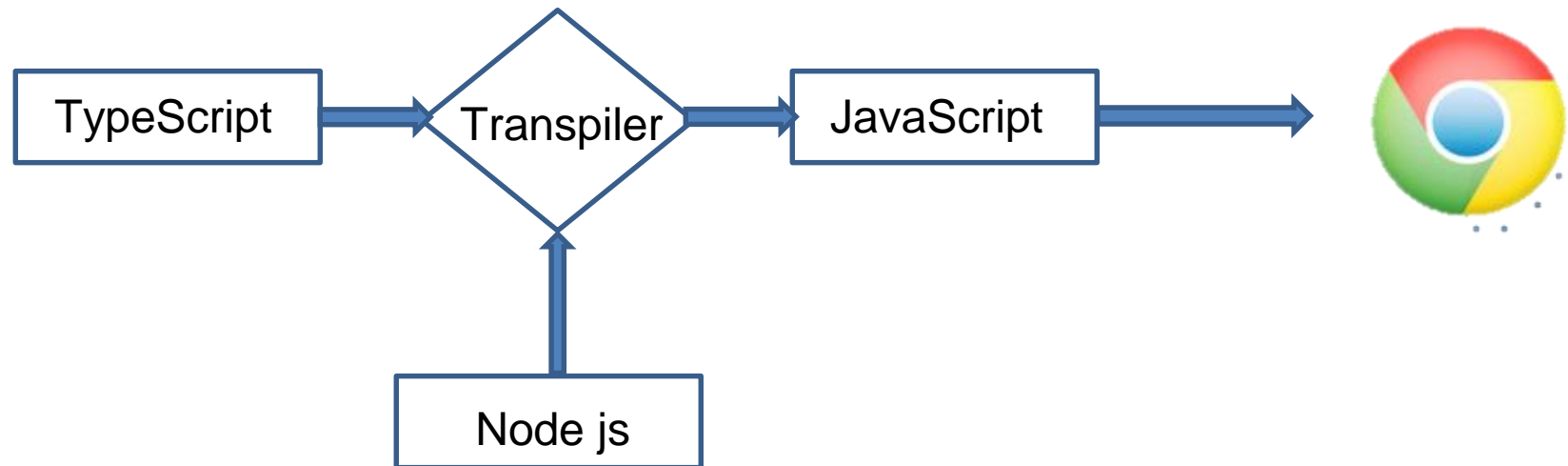
Environmental setup

Installing Angular

1) Install **node.js** and **npm** - <https://nodejs.org/en/>

Verify that you are running at least Node.js version 13.x or greater and npm version 5.x or greater by running **node -v** and **npm -v** in a terminal/console window. Newer versions are fine.

Why node js ?



2) Install **angular-cli** - <https://cli.angular.io/>

Run command **npm install -g @angular/cli**

AngularJS IDEs

AngularJS IDEs

- Web storm
- Atom
- Sublime
- Best editor: Visual Studio

Web storm

```

1  <!DOCTYPE html>
2  <!--[if lt IE 7]>    <html lang="en" ng-app="myApp" class="no-js lt-ie9 lt-ie8 lt-ie7"> <![endif]-->
3  <!--[if IE 7]>      <html lang="en" ng-app="myApp" class="no-js lt-ie9 lt-ie8"> <![endif]-->
4  <!--[if IE 8]>      <html lang="en" ng-app="myApp" class="no-js lt-ie9"> <![endif]-->
5  <!--[if gt IE 8]><!--> <html lang="en" ng-app="myApp" class="no-js"> <!--<![endif]-->
6  <head>
7    <meta charset="utf-8">
8    <meta http-equiv="X-UA-Compatible" content="IE=edge">
9    <title>My AngularJS App</title>
10   <meta name="description" content="">
11   <meta name="viewport" content="width=device-width, initial-scale=1">
12   <link rel="stylesheet" href="lib/html5-boilerplate/dist/css/normalize.css">
13   <link rel="stylesheet" href="lib/html5-boilerplate/dist/css/main.css">
14   <link rel="stylesheet" href="app.css">
15   <script src="lib/html5-boilerplate/dist/js/vendor/modernizr-2.8.3.min.js"></script>
16 </head>
17 <body>
18   <ul class="menu">
19     <li><a href="#!/view1">view1</a></li>
20     <li><a href="#!/view2">view2</a></li>
21   </ul>
22
23   <!--[if lt IE 7]>
24     <p class="browsehapp">You are using an <strong>outdated</strong> browser. Please <a href="http://browseh
25   <![endif]-->
  
```

html.no-js > head > link

Notifications for installing dependencies from package.json are disabled. // Enable them back with the "Enable Notifications about Installing Dependencies from package.json" act... (moments ago) 12:26 IE UTF-8 2 spaces*

Atom

sports.html — C:\Users\RITWIK\Desktop\Ritwik Raj\Part time data\sportswebpage — Atom

File Edit View Selection Find Packages Help

Project

sportswebpage

assasins.jpg

pubg.jpg

sports.html

style.css

31

</header>

32

<div class="section-main container">

33

<h1>myGaming</h1>

34

<h2>Your best place to visualize and enjoy playing Games</h2>

35

<p class="lead hide-on-small">

36

myGames is the best way to organize and enjoy the feel of playing and stepping into the world of 3D Games - and shop for the ones you war

37

</p>

38

</div>

39

</div>

40

41

<section id="aboutus" class="section">

42

<div class="container">

43

<h2 class="section-head">

44

<i class="fas fa-gaming"></i> About Us

45

</h2>

46

<h3>45 million Games. 10000 arcade.</h3>

47

<p class="lead">Play over 45 million Games, ad-free. Or download games and shop to play offline. All

48

the games in your personal myGames library – no matter where it came from – lives right alongside the Epic Games catalog. Start your free

49

Start Your Trial Now

50

<p class="text-light">Epic Games is available in myGaming, and for iOS and Android devices.</p>

51

52

</div>

53

</section>

54

55

<section id="xbox" class="section bg-light">

56

<div class="container">

57

<h2 class="section-head">

58

<i class="fas fa-gaming"></i> Xbox

59

</h2>

60

<h3>The Xbox and Xbox gaming collection you always wished for. Granted.</h3>

61

<p class="lead">With over 100,000 2D games and 3D games to choose from, there's always something great to play on myGaming and if you watch c

62

Read More

63

64

</div>

65

sports.html 64:15

CRLF

UTF-8

HTML

GitHub

Git (0)

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Sublime Text

C:\Users\RITWIK\Desktop\Ritwik Raj\Part time data\sportswebpage\sports.html • (demo) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS

- demo
 - scripts
 - angular.min.js
 - script.js
 - index.html

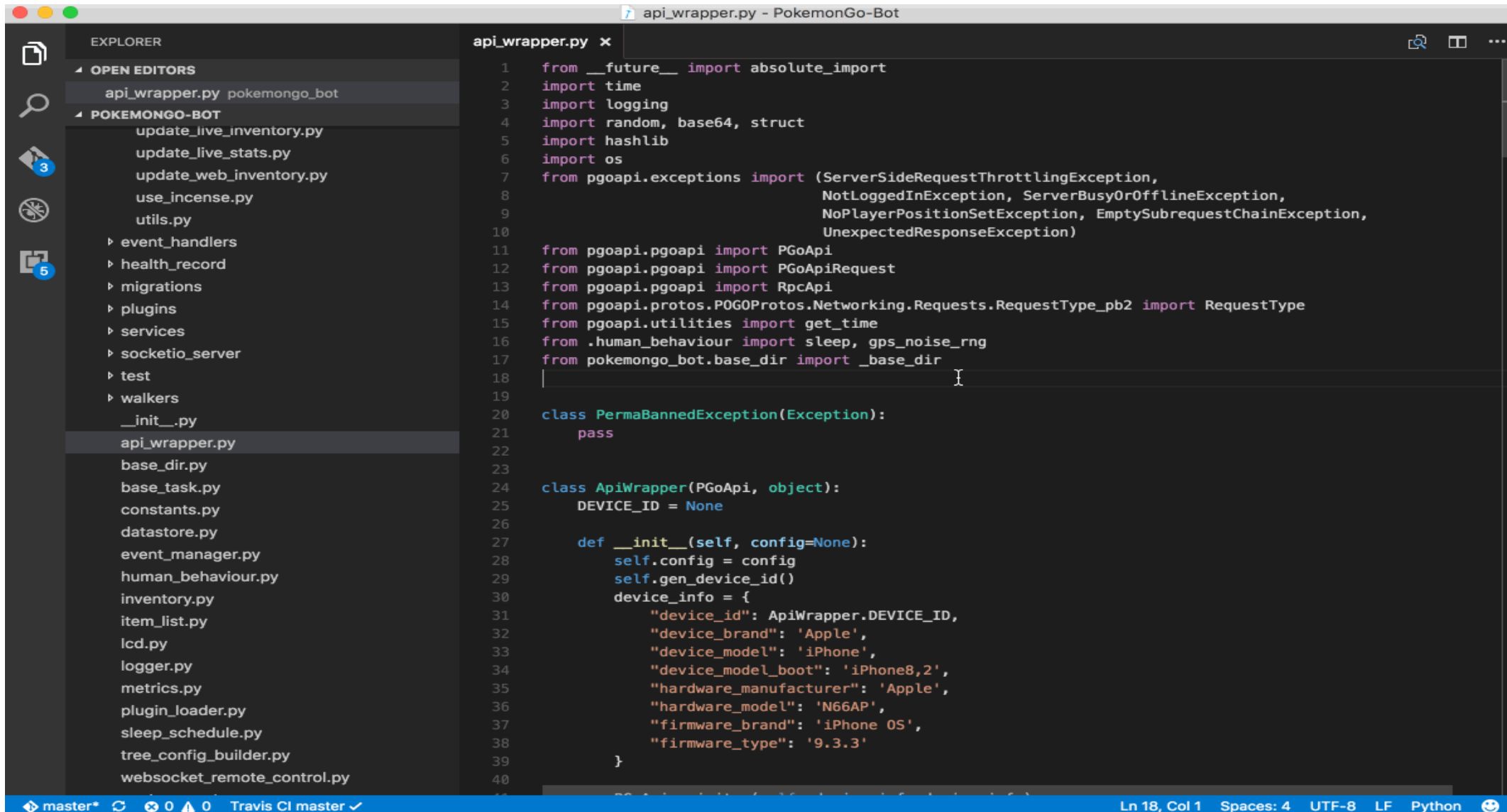
```

31     </header>
32     <div class="section-main container">
33         <h1>myGaming</h1>
34         <h2>Your best place to visualize and enjoy playing Games</h2>
35         <p class="lead hide-on-small">
36             myGames is the best way to organize and enjoy the feel of playing and stepping into the world of 3D Games - and shop for
37             the ones you want. Enjoy all the entertainment provided free and in any platforms - MAC and Windows.
38         </p>
39     </div>
40
41     <section id="aboutus" class="section">
42         <div class="container">
43             <h2 class="section-head">
44                 <i class="fas fa-gaming"></i> About Us
45             </h2>
46             <h3>45 million Games. 10000 arcade.</h3>
47             <p class="lead">Play over 45 million Games, ad-free. Or download games and shop to play offline. All
48                 the games in your personal myGames library – no matter where it came from – lives right alongside the Epic Games catalog.
49                 Start your free three-month trial with no commitment, and cancel anytime.</p>
50             <a href="#" class="btn btn-primary mb">Start Your Trial Now</a>
51             <p class="text-light">Epic Games is available in myGaming, and for iOS and Android devices.</p>
52             
53         </div>
54     </section>
55
56     <section id="xbox" class="section bg-light">
57         <div class="container">
58             <h2 class="section-head">
59                 <i class="fas fa-gaming"></i> Xbox
60             </h2>
61             <h3>The Xbox and Xbox gaming collection you always wished for. Granted.</h3>
62             <p class="lead">With over 100,000 2D games and 3D games to choose from, there's always something great to play on myGaming and
63                 if you watch on SONY TV 4K, you'll be able to enjoy a tremendous selection of your favorite content in 4K HDR. So get ready to
64                 experience Xbox of your favorite Games you've been waiting to play – anytime, anywhere. Just tap to play, or even download if
65                 you're going somewhere you won't have Wi-Fi.</p>
66             <a href="#" class="btn btn-secondary">Read More</a>
67             
68         </div>
69     </section>

```

Line 65, Column 15 Spaces: 2 HTML

Visual studio code



The screenshot shows the Visual Studio Code interface. On the left, the Explorer sidebar displays the project structure for 'POKEMONGO-BOT'. The main editor window is open to 'api_wrapper.py', showing Python code with imports and class definitions. The status bar at the bottom indicates the current file is at line 18, column 1, using UTF-8 encoding and LF line endings.

```

1  from __future__ import absolute_import
2  import time
3  import logging
4  import random, base64, struct
5  import hashlib
6  import os
7  from pgoapi.exceptions import (ServerSideRequestThrottlingException,
8                                NotLoggedInException, ServerBusyOrOfflineException,
9                                NoPlayerPositionSetException, EmptySubrequestChainException,
10                               UnexpectedResponseException)
11  from pgoapi.pgoapi import PGoApi
12  from pgoapi.pgoapi import PGoApiRequest
13  from pgoapi.pgoapi import RpcApi
14  from pgoapi.protos.POGOProtos.Networking.Requests.RequestType_pb2 import RequestType
15  from pgoapi.utilities import get_time
16  from .human_behaviour import sleep, gps_noise_rng
17  from pokemongo_bot.base_dir import _base_dir
18  |
19
20  class PermaBannedException(Exception):
21      pass
22
23
24  class ApiWrapper(PGoApi, object):
25      DEVICE_ID = None
26
27      def __init__(self, config=None):
28          self.config = config
29          self.gen_device_id()
30          device_info = {
31              "device_id": ApiWrapper.DEVICE_ID,
32              "device_brand": 'Apple',
33              "device_model": 'iPhone',
34              "device_model_boot": 'iPhone8,2',
35              "hardware_manufacturer": 'Apple',
36              "hardware_model": 'N66AP',
37              "firmware_brand": 'iPhone OS',
38              "firmware_type": '9.3.3'
39          }
40

```


Introduction to Visual studio code

Angular App Fundamentals

Create Angular App

Once angular-cli is installed, create a new app

run command - **ng new <name of the app>**

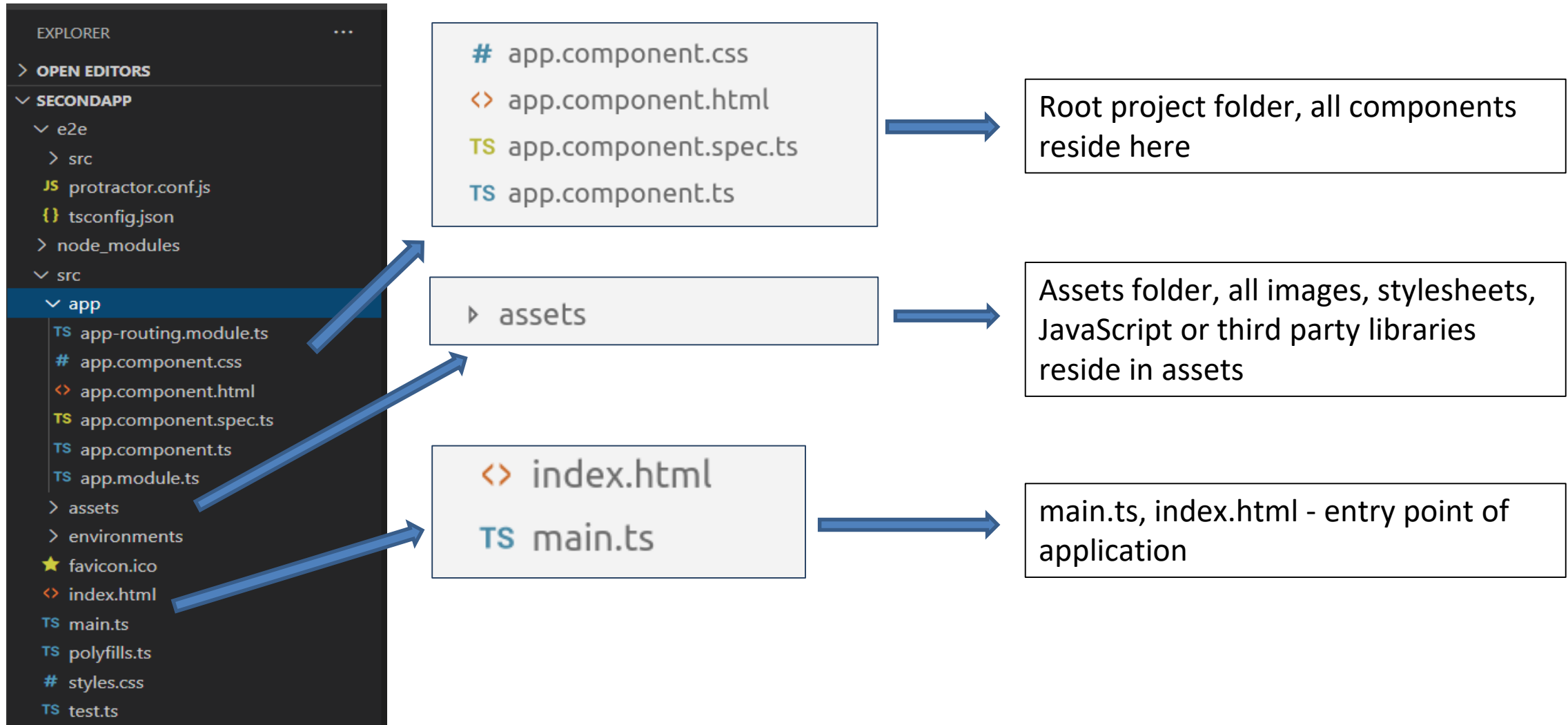
Once the application is created, go to the application folder and run command - **ng serve** to serve the application.

Serve/Run Angular App :-

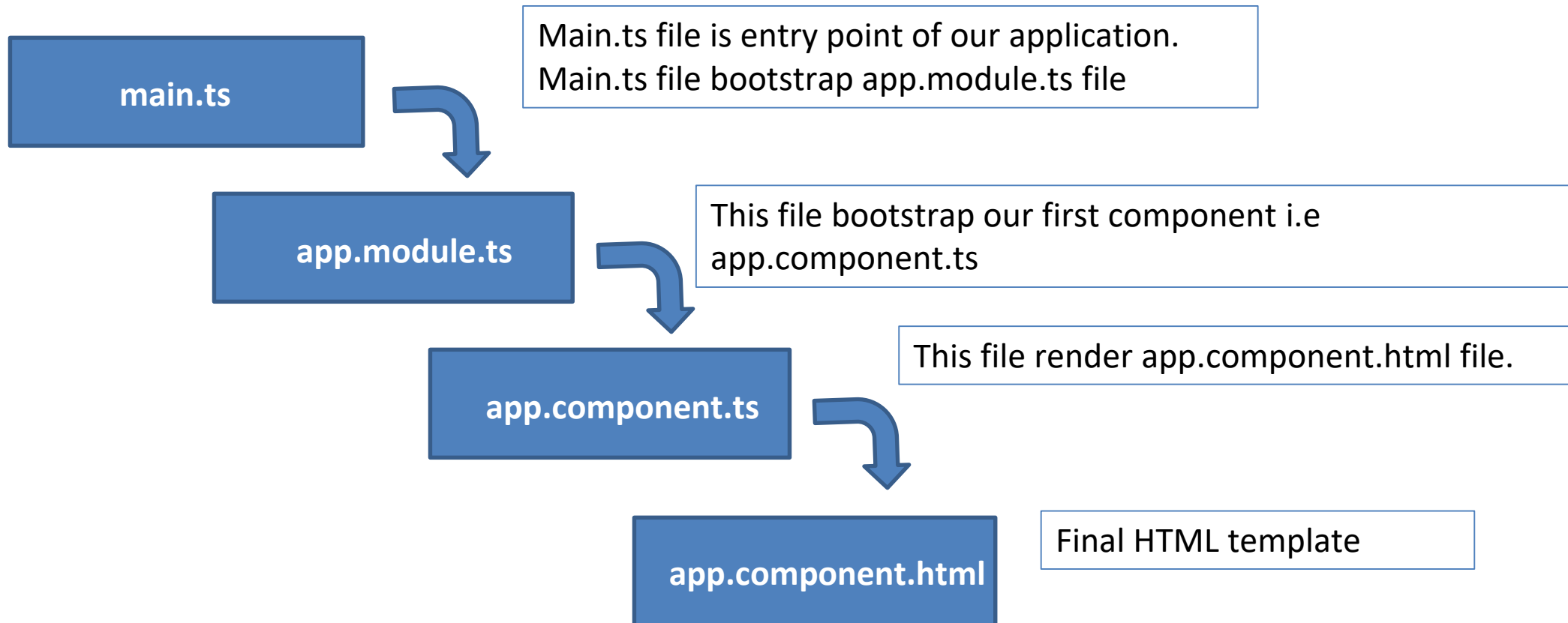
The angular is by default served at <http://localhost:4200>

Open this link in your browser

Angular Project Structure



How Angular App Starts?



Bootstrapping the AppModule

```
TS main.ts x
1  import { enableProdMode } from '@angular/core';
2  import { platformBrowserDynamic } from '@angular/platform-browser-dynamic';
3
4  import { AppModule } from './app/app.module';
5  import { environment } from './environments/environment';
6
7  if (environment.production) {
8    | enableProdMode();
9  }
10
11  platformBrowserDynamic().bootstrapModule(AppModule)
12  | .catch(err => console.log(err));
13
```

Bootstrapping the AppComponent

TS *app.module.ts* ✕

```
1  import { BrowserModule } from '@angular/platform-browser';
2  import { NgModule } from '@angular/core';
3
4  import { AppComponent } from './app.component';
5
6  @NgModule({
7    declarations: [
8      AppComponent
9    ],
10   imports: [
11     BrowserModule
12   ],
13   providers: [],
14   bootstrap: [AppComponent]
15 })
16 export class AppModule { }
17
```

Simple AngularJS App

Companies using AngularJS



Flipkart

YouTube

Gmail

Nike

UpWork

SONY

PayPal

HBO

Samsung

Microsoft Office

Advantages of AngularJS

Advantages of AngularJS

- Number of errors or issues will be minimal as it's an open source framework
- Two-way binding – we used to write extra JS code to keep the data in HTML code and data later in sync. Now, Angular will do this automatically
- Routing – Moving from one view to another is pretty easy here as it will be a SPA.
- It supports both Unit testing and Integration testing.
- Directives – It provides its own libraries and directives which makes it more easy to use and code.



Thank You