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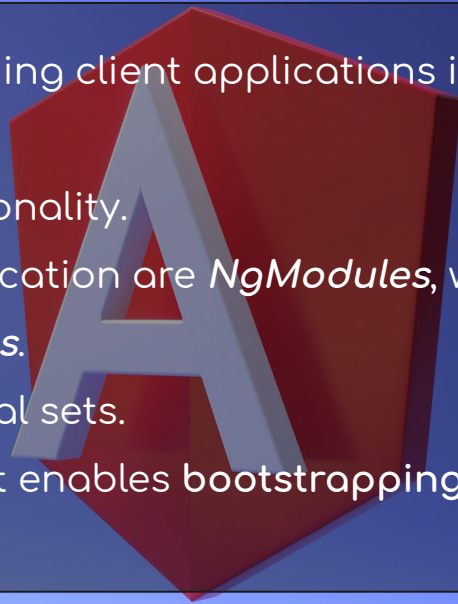


ANGULAR

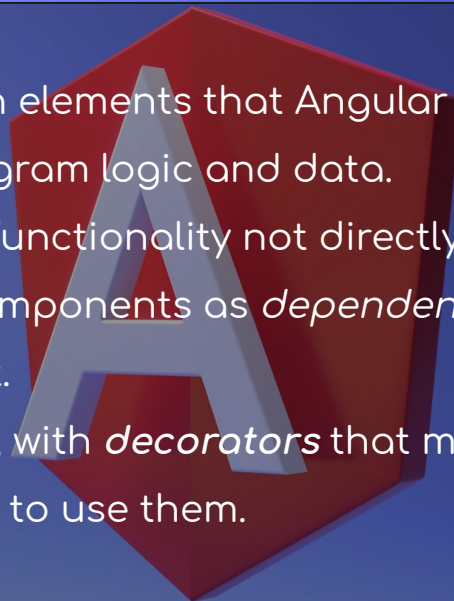


What is Angular?

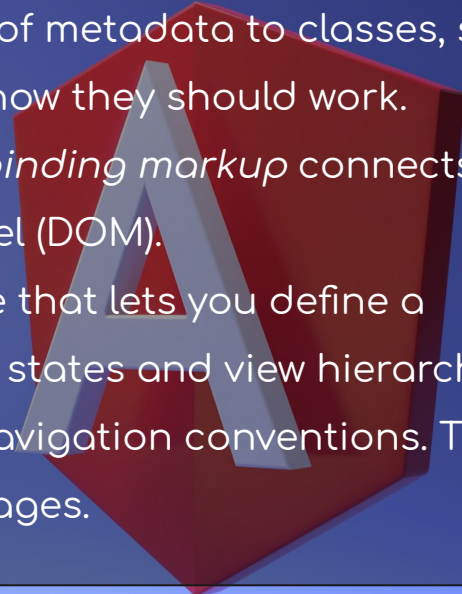
- Angular is a platform and framework for building client applications in HTML and TypeScript (OO version of JS).
- Angular implements core and optional functionality.
- The basic building blocks of an Angular application are *NgModules*, which provide a compilation context for *components*.
- NgModules collect related code into functional sets.
- An app always has at least a *root module* that enables *bootstrapping*, and typically has many more *feature modules*.



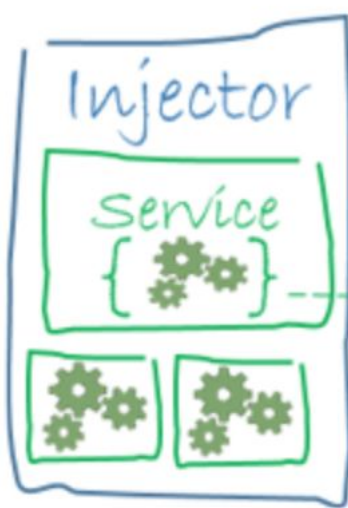
- **Components** define *views*, which are sets of screen elements that Angular can choose among and modify according to your program logic and data.
- Components use *services*, which provide specific functionality not directly related to views. Service providers can be *injected* into components as *dependencies*, making your code modular, reusable, and efficient.
- Both components and services are simply classes, with *decorators* that mark their type and provide metadata that tells Angular how to use them.



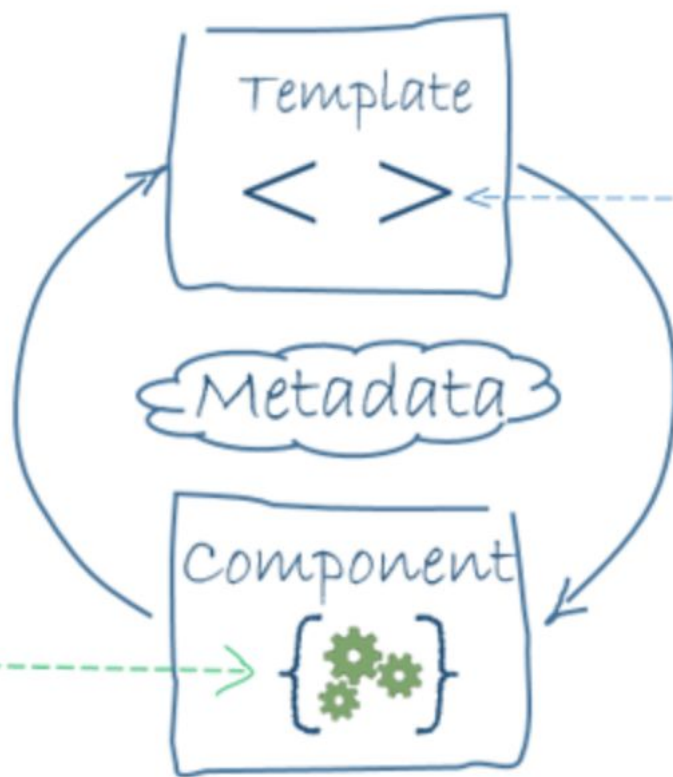
- **Decorators** are functions that modify JavaScript classes. Angular defines a number of decorators that attach specific kinds of metadata to classes, so that the system knows what those classes mean and how they should work.
- **Template *directives*** provide program logic, and *binding markup* connects your application data and the Document Object Model (DOM).
- The Angular **Router** NgModule provides a service that lets you define a navigation path among the different application states and view hierarchies in your app. It is modeled on the familiar browser navigation conventions. The router maps URL-like paths to views instead of pages.



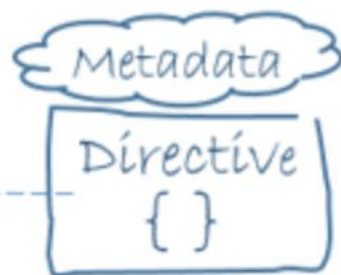
Module Component { }	Module Service { }
Module value 3.1415	Module Fn λ



Property Binding



Event Binding



Angular - AngularJS VS Python

AngularJS: *Superheroic JavaScript MVW Framework.* AngularJS lets you write client-side web applications as if you had a smarter browser. It lets you use good old HTML (or HAML, Jade and friends!) as your template language and lets you extend HTML's syntax to express your application's components clearly and succinctly. It automatically synchronizes data from your UI (view) with your JavaScript objects (model) through 2-way data binding;

Python: *A clear and powerful object-oriented programming language, comparable to Perl, Ruby, Scheme, or Java.* Python is a general purpose programming language created by Guido Van Rossum. Python is most praised for its elegant syntax and readable code, if you are just beginning your programming career python suits you best.



922



1K



259.2K



3.4K



29.5K



1.3M

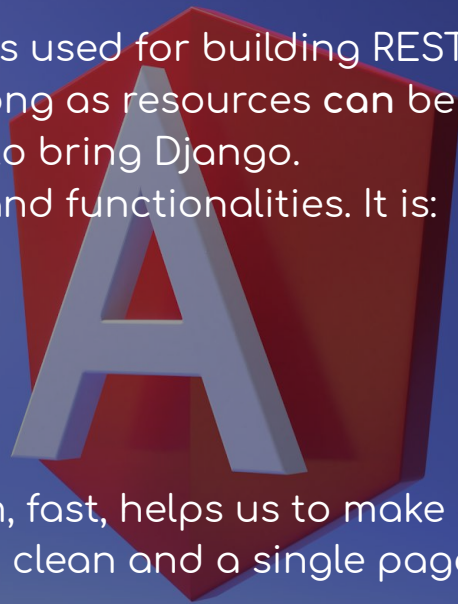
Angular and Python

For **Angular**, it really doesn't matter what technology is used for building REST API whether it is Java Springboot, Node.js, **Python** or any other. As long as resources can be accessed via HTTP commands, **Angular** is good. However, we need to bring Django.

Django is an all in one pack having various features and functionalities. It is:

1. Fast
2. Lots of features
3. Secure
4. Scalable

This combined with Angular which is Cross-Platform, fast, helps us to make beautiful UI and the list goes on. The best - helps build a scalable, clean and a single page web application.



Some resources:

<https://www.fullstackpython.com/angular.html>

<https://medium.com/swlh/django-angular-4-a-powerful-web-application-60b6fb39ef34>

How to Start with Angular

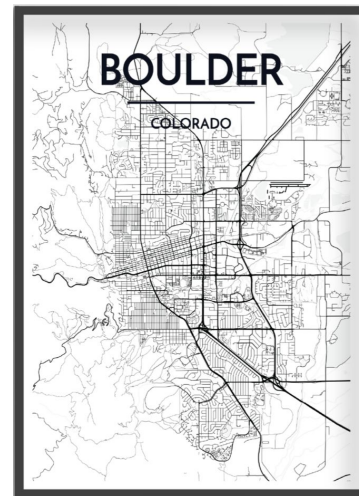
- Requires Node.js version 10.9.0 or later
- Install NPM package management (Angular, the Angular CLI, and Angular apps depend on features and functionality provided by libraries that are available as npm packages)
- Install Angular CLI
- Create new workspaces when you're creating a new project. (`ng new my-app`)
- Open your new workspace (`ng serve --open`)



Angular Demo



Leaflet

The logo for Leaflet, featuring the word "Leaflet" in a grey, cursive-style font. To the right of the text is a stylized black branch with two orange leaves.



- Leaflet is the leading open-source JavaScript library for mobile-friendly interactive maps. It has all mapping features.
- It works efficiently across all major desktop and mobile platforms out-of-box, and taking advantage of html5 and css3 on modern browsers.
- It can be extended with huge amount of plugins in



How to setup your leaflet map on html

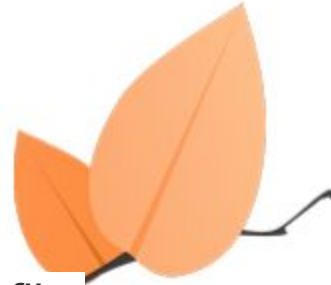
- Use any text editor to edit your index.html file
- Download map data free
 - <https://www.naturalearthdata.com/downloads/110m-cultural-vectors/>
- Map data is in the shapefile format, so we need to convert it into Geo Jason
- Geo Jason is a format for encoding a variety of geographic data structures. So we need to download QGIS
- QGIS is open source GIS software that use to prepare and view data
 - <https://www.qgis.org/en/site/forusers/download.html>



To Convert map data file into geojson file:

- Go to QGIS App
 - Go to Layer
 - Add layer
 - Add vector layer
- Then we can add map data and convert into geojson

Peaflat



To prepare html page:

- Include Leaflet CSS file in the head section of html file:

```
<link rel="stylesheet" href="https://unpkg.com/leaflet@1.5.1/dist/leaflet.css"
integrity="sha512-xwE/Az9zrjBlphAcBb3F6JVqxf46+CDLwfLMHloNu6KEQCAWi6HcDUbeOfBlptF7
tcCzusKFjFw2yuvEpDL9wQ==" crossorigin=""/>
```

- Include Leaflet JavaScript file after Leaflet's CSS:

```
<script src="https://unpkg.com/leaflet@1.5.1/dist/leaflet.js"
integrity="sha512-GffPMF3RvMeYyc1LWMHtK8EbPv0iNZ8/oTtHPx9/cc2ILxQ+u905qlwdpUL
aqDkyBKgOaB57QTMg7ztg8Jm2Og=="crossorigin=""></script>
```

Demo