# m jak mijacz

- pracuję w SoftwareHut
- rozwiązuje problemy
- 11 lat w .NET/web/js
  *to nie znaczy, że tyle programuję
- „aktywny" uczestnik Białostockiej Grupy <placeholder>
- znam Karola, Piotrka, Przemka, Muchę i %

# angular od podstaw (zasady)

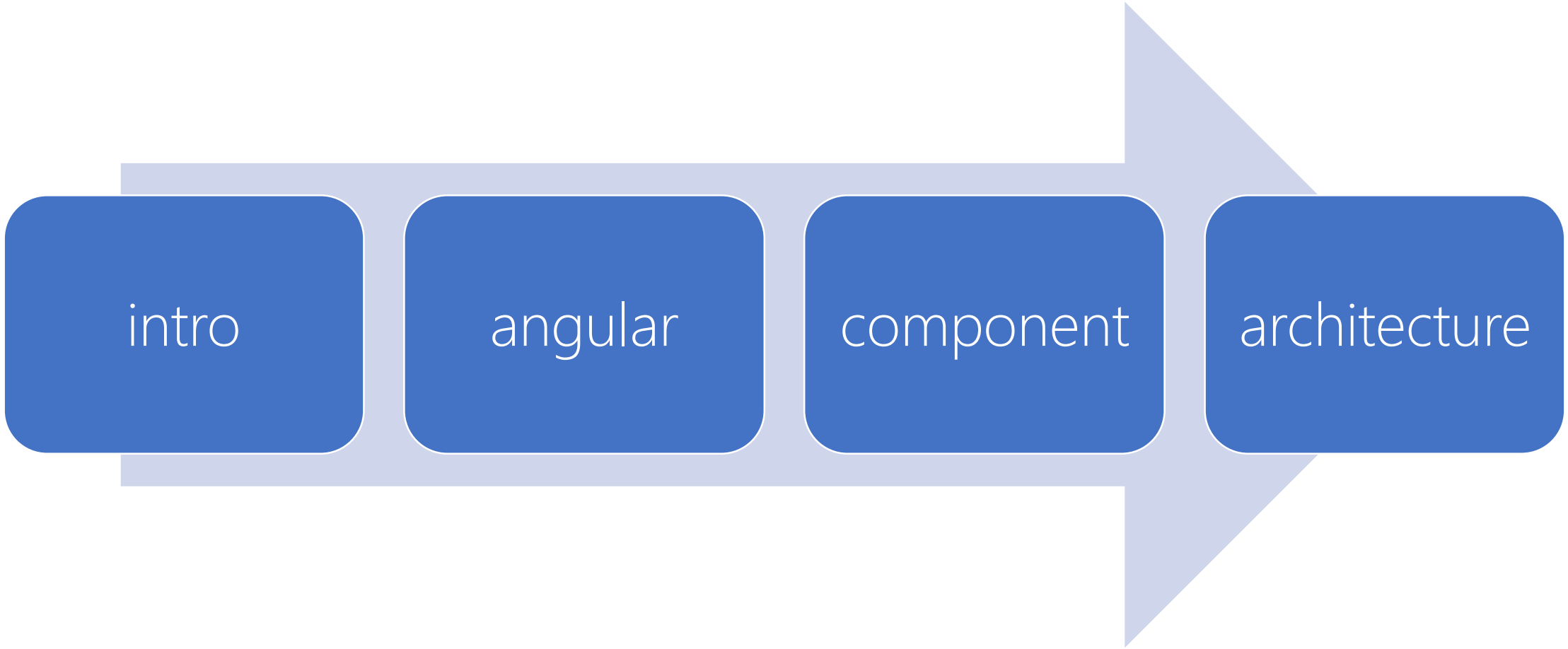
wykład (pytania)

pracownia (zaangażowanie)

- zadania >> prace domowe
- projekt | test

https://github.com/Banndzior

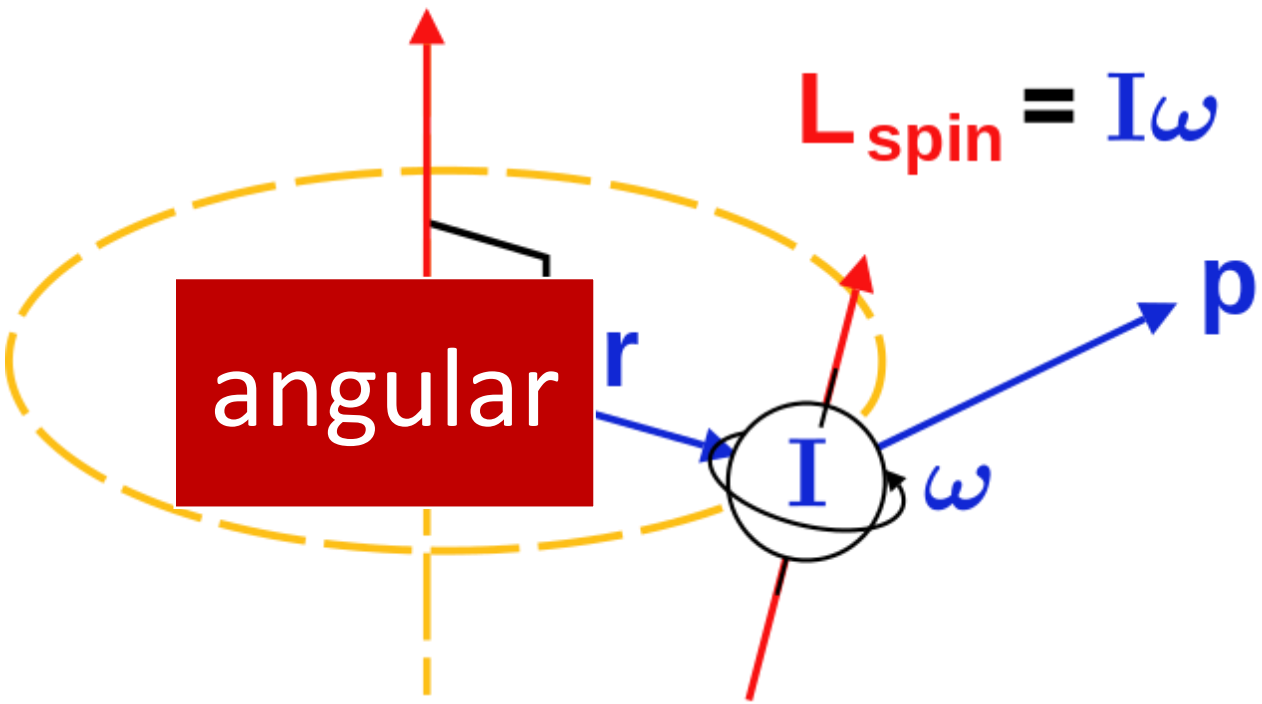
# plan

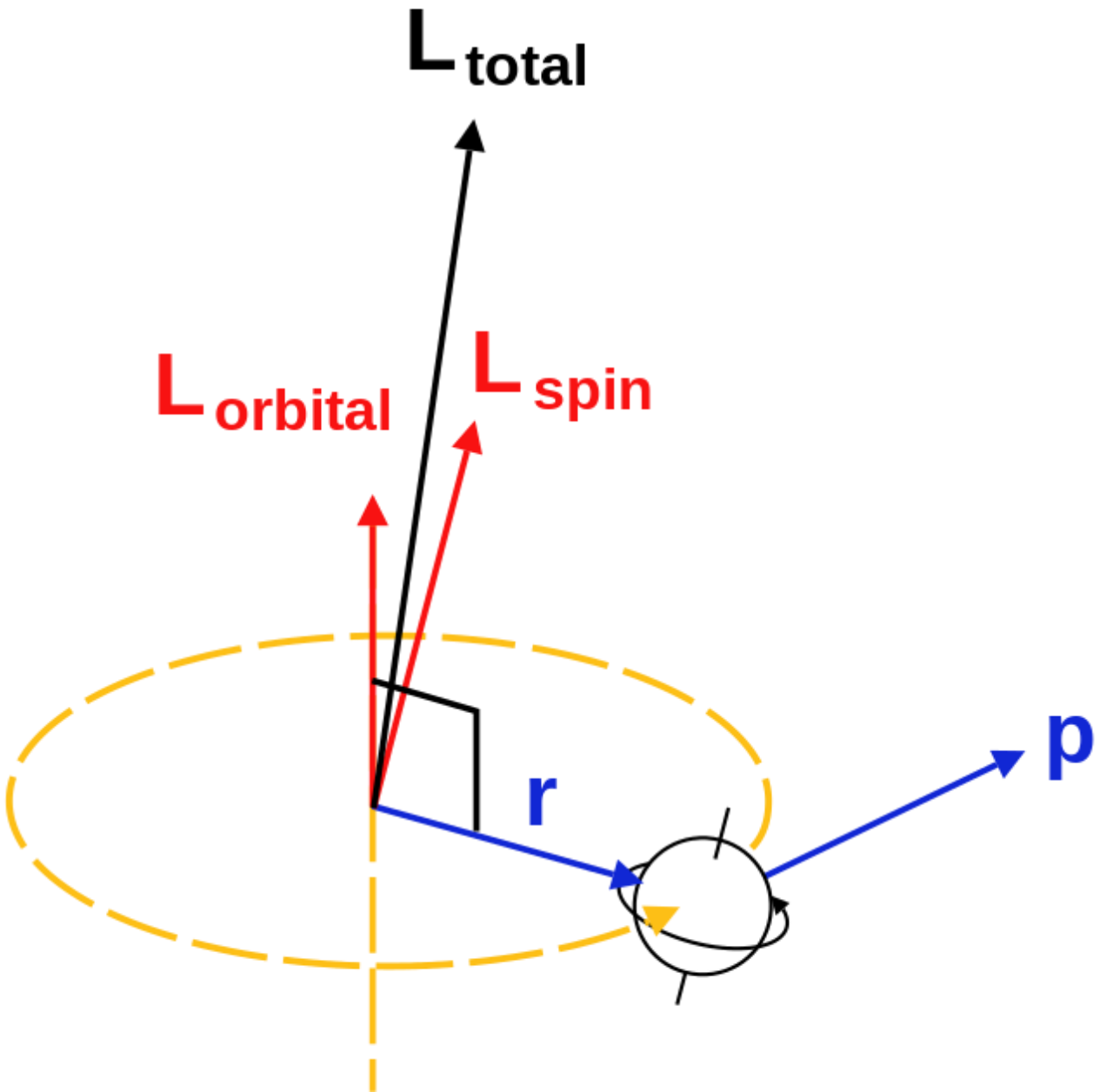


$L_{total} = L_{orbital} + L_{spin}$

$L_{orbital} = r \times p$

$L_{spin} = I\omega$



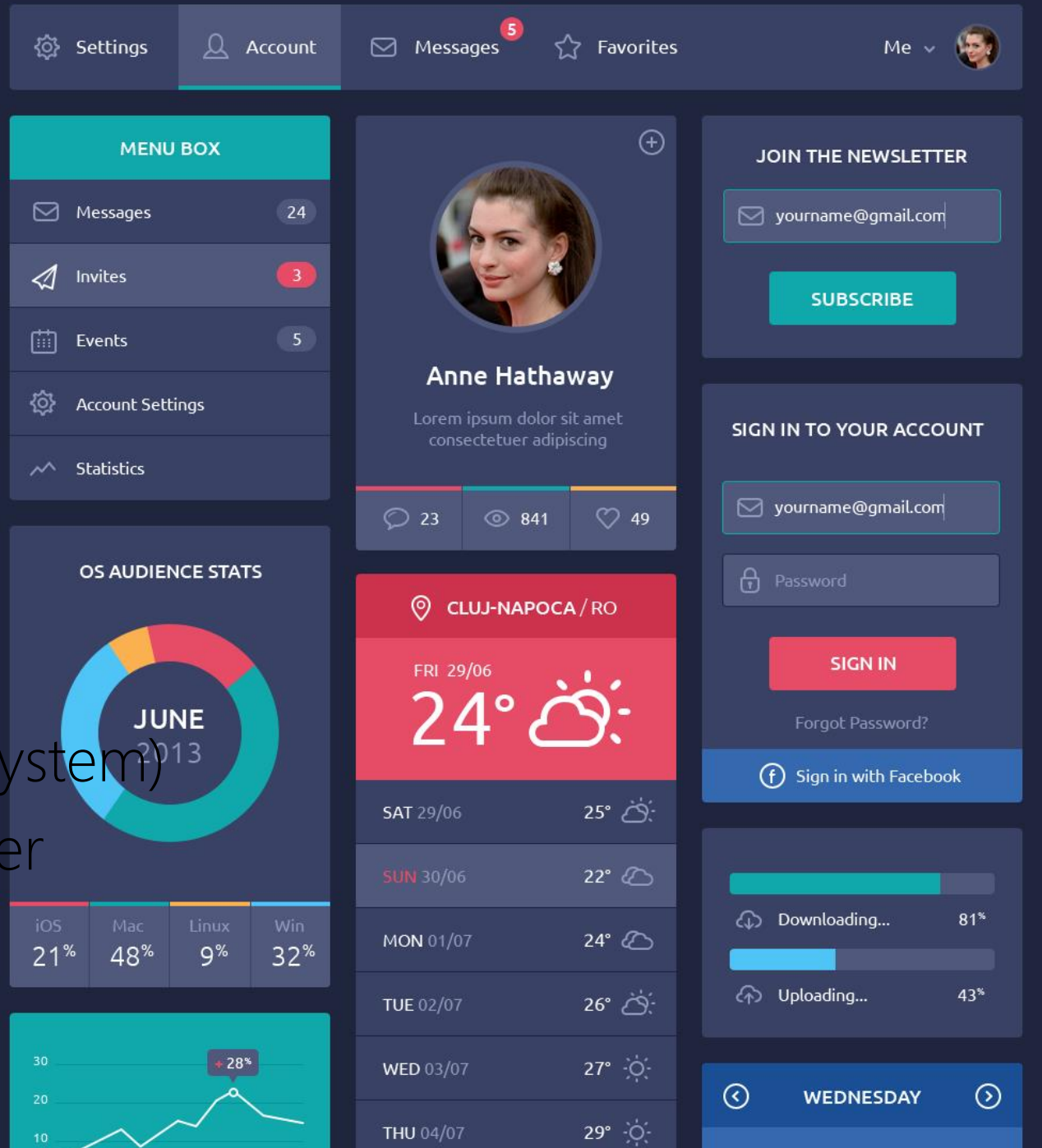



# angular - intro

- solution for single-page applications (SPAs)
- framework not library (common structure & standards)
- code in typescript (extend javascript)
- to create (self-contained) web components
- to develop large applications (manage complexity)
- to maintain large applications (modularity)

# angular 101

- component based-UI
- 1-way data flow
- es6 / typescript
- built-in directives
- DI system
- performance (change detection system)
- mobile suport & server side render
- cli



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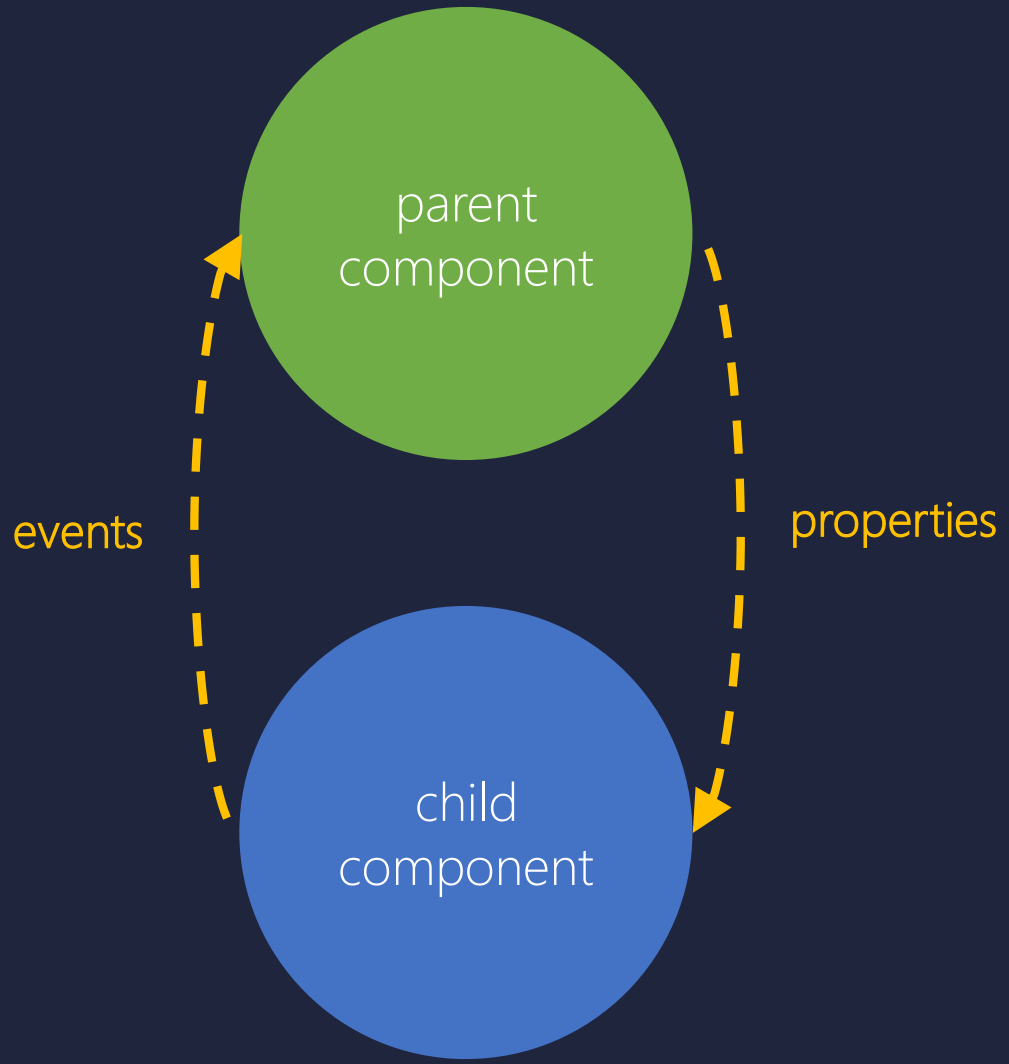

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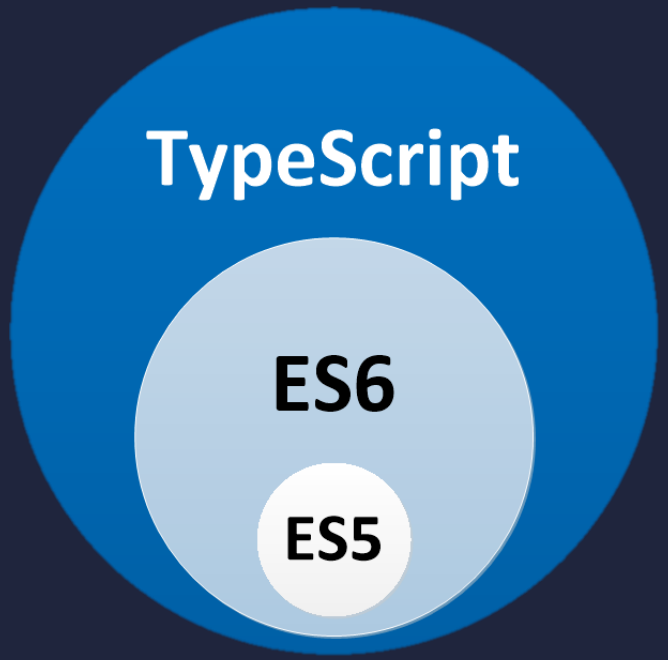

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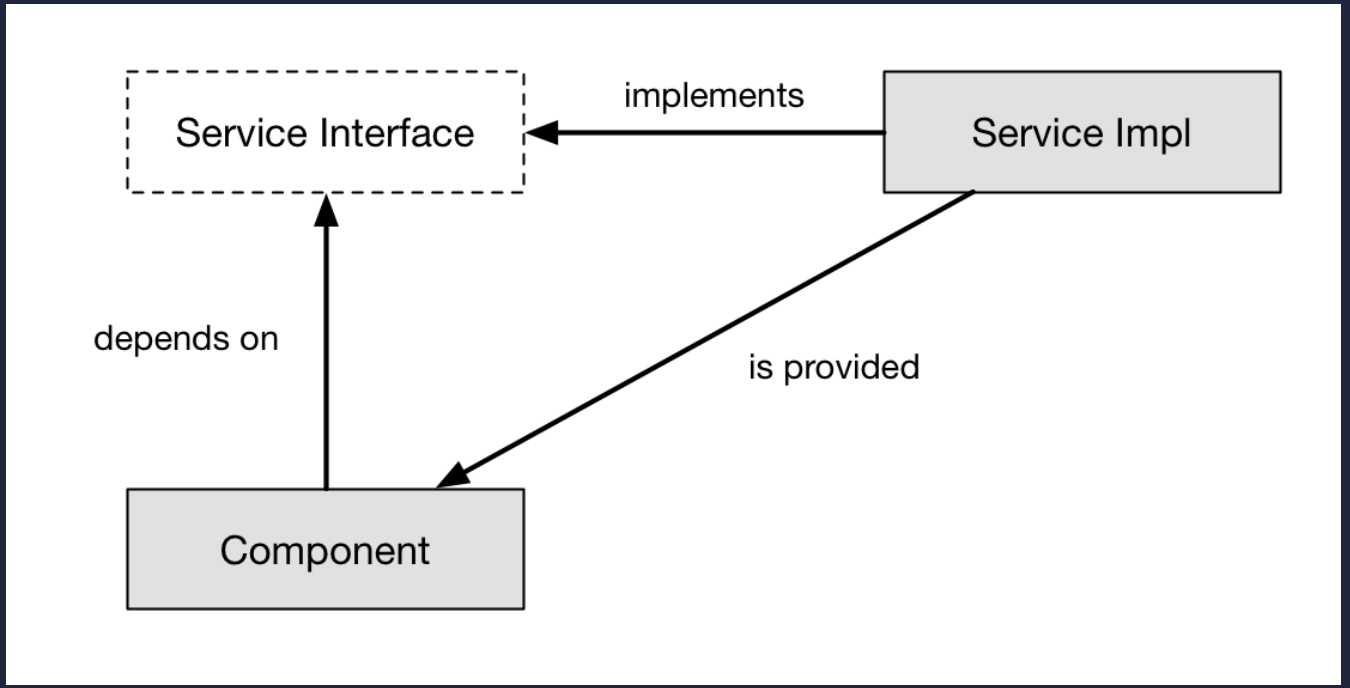

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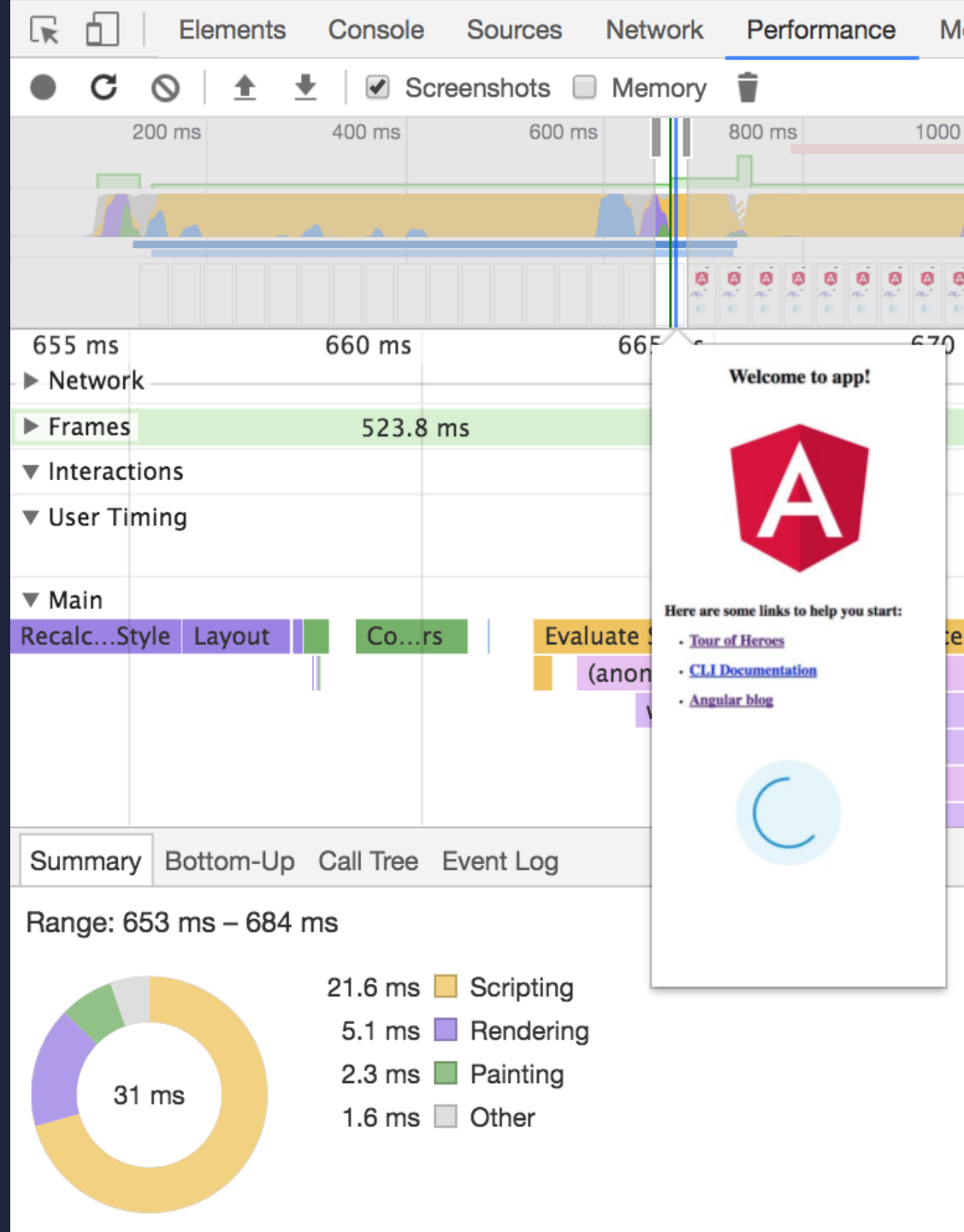

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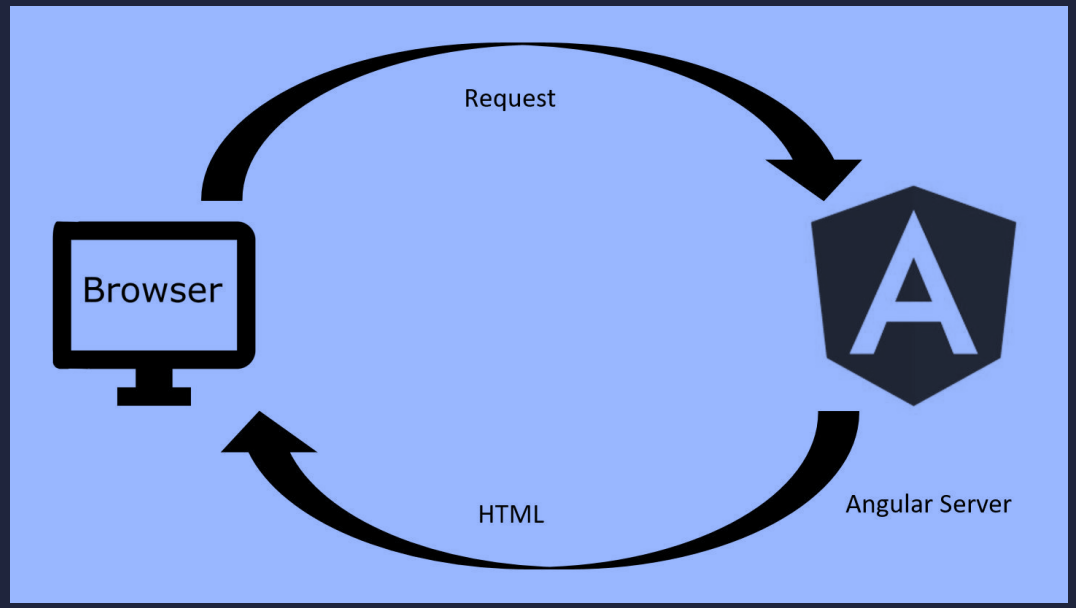

# angular 101

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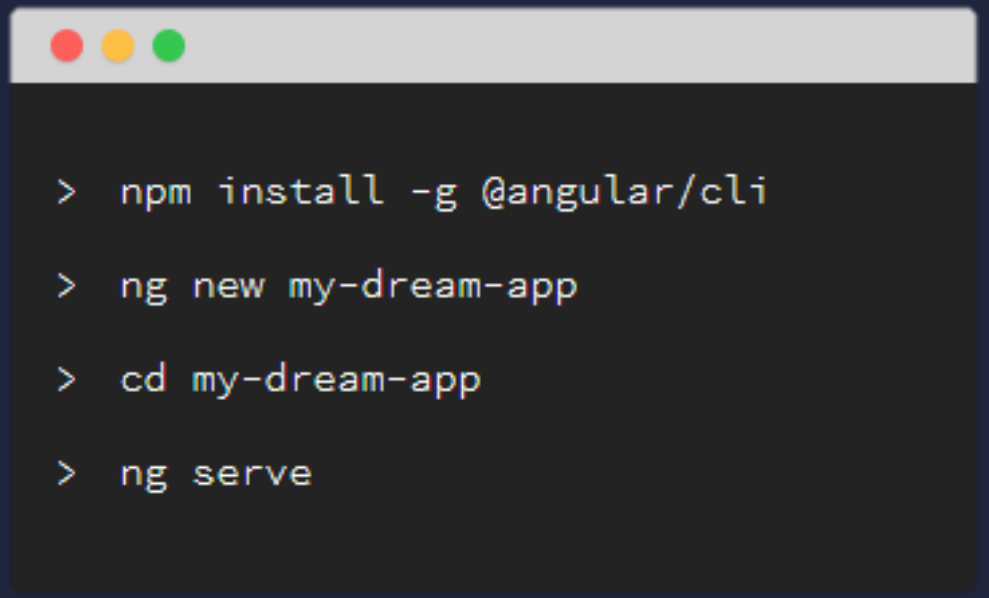
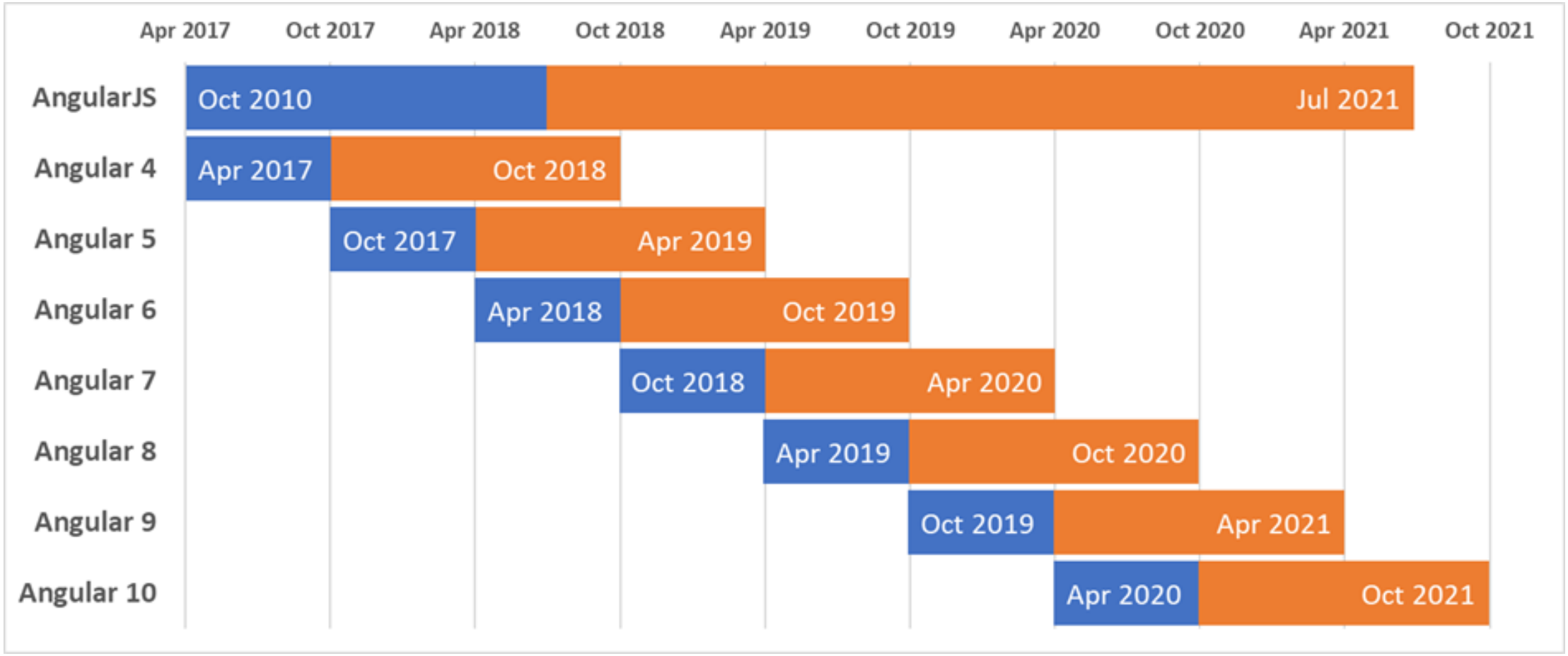
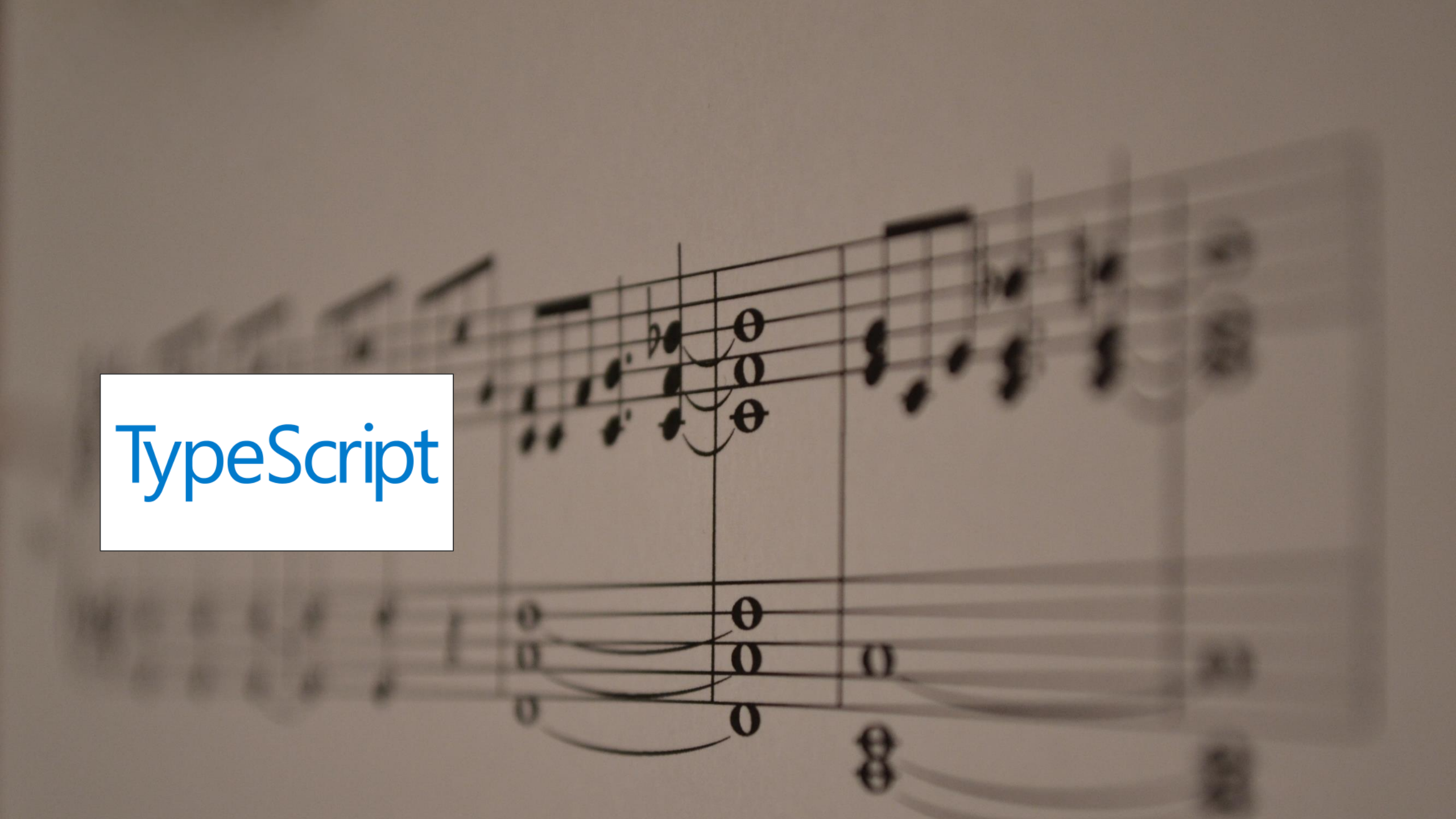
- command line interface



# angular release plans timeline



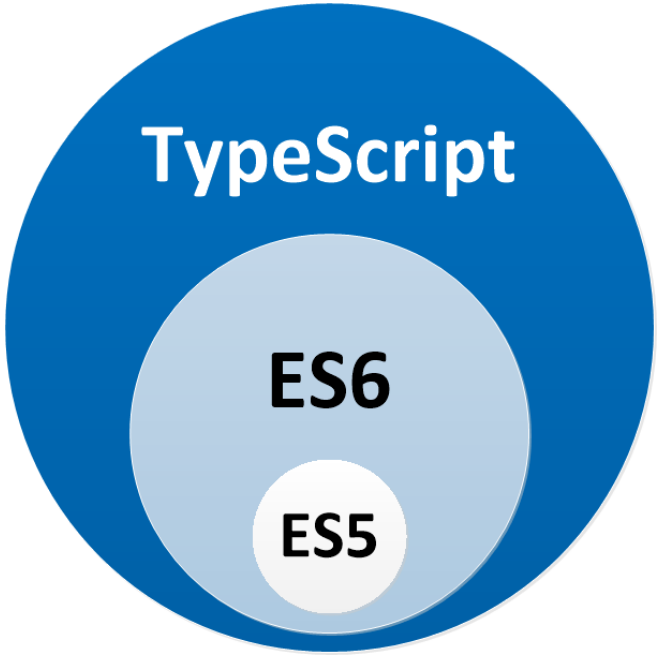

TypeScript

# typescript

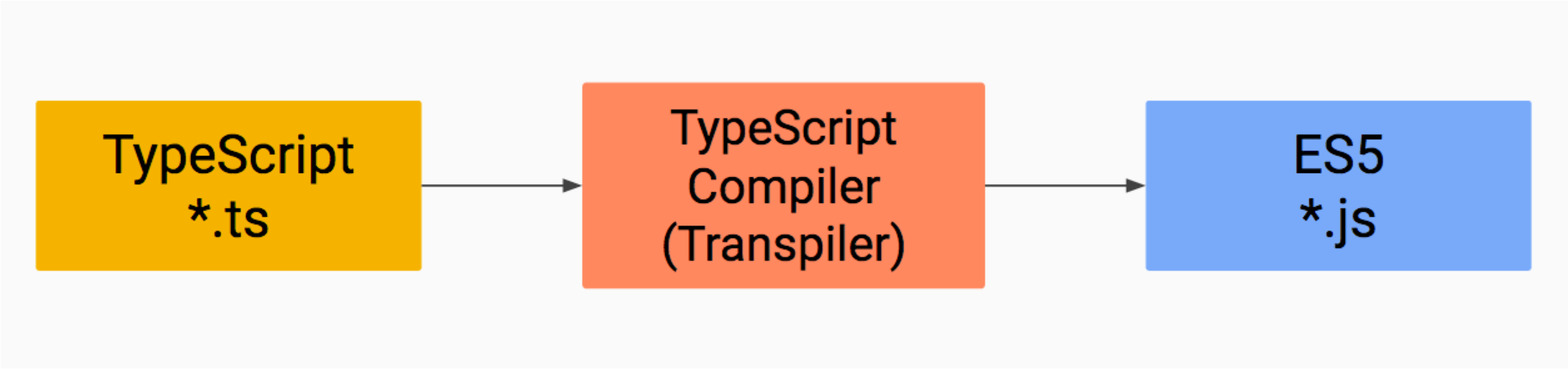
- code transpiled into js
- decorators (~annotations) - allow us to decorate classes with annotations and properties as well as meta-functionality

**TS = ES6 + Types + Annotations**

http://www.typescriptlang.org/



# typescript transpilation



# typescript vs javascript

TS

```ts
class Greeter {
  greeting: string;
  constructor(message: string) {
   this.greeting = message;
  }

  greet() {
    return "Hello, " + this.greeting;
  }
}

let greeter = new Greeter("world");
```

JS

```js
var Greeter = /** @class */
(function () {
  function Greeter(message) {
    this.greeting = message;
  }

  Greeter.prototype.greet
   = function () {
    return "Hello, " + this.greeting;
  };

  return Greeter;
}());
var greeter = new Greeter("world");
```

15°
Guangzhou
Sunday
27
October 2013
82%
59°
Guangzhou
CPU
76%
58%
Dn 0.0 K
Up 0.0 K
IP 192.168.2.2
CPU
58%
70%
70%
58%
12°
Partly Cloudy
21° - 13°
Siena
Monday
Tuesday
Wednesday
21°
14°
20°
13°
21°
10°
Accuweather.com
NBCNews.comTed Cruz in Iowa: Has...
BBC NewsSaudi ban on women drivers:...
Telegraph.co.ukProtesters march in W...
NBC New YorkMan Carrying Guns, A...
Google News
component(s)
Add your text...
Search...
57%
76%
58%
72%
C: 149.0 G
Free 62.4 G
Used 86.5 G
Battery
82%
Battery Power
Offline
Tenth 8
0

# component(s)

everything is component…

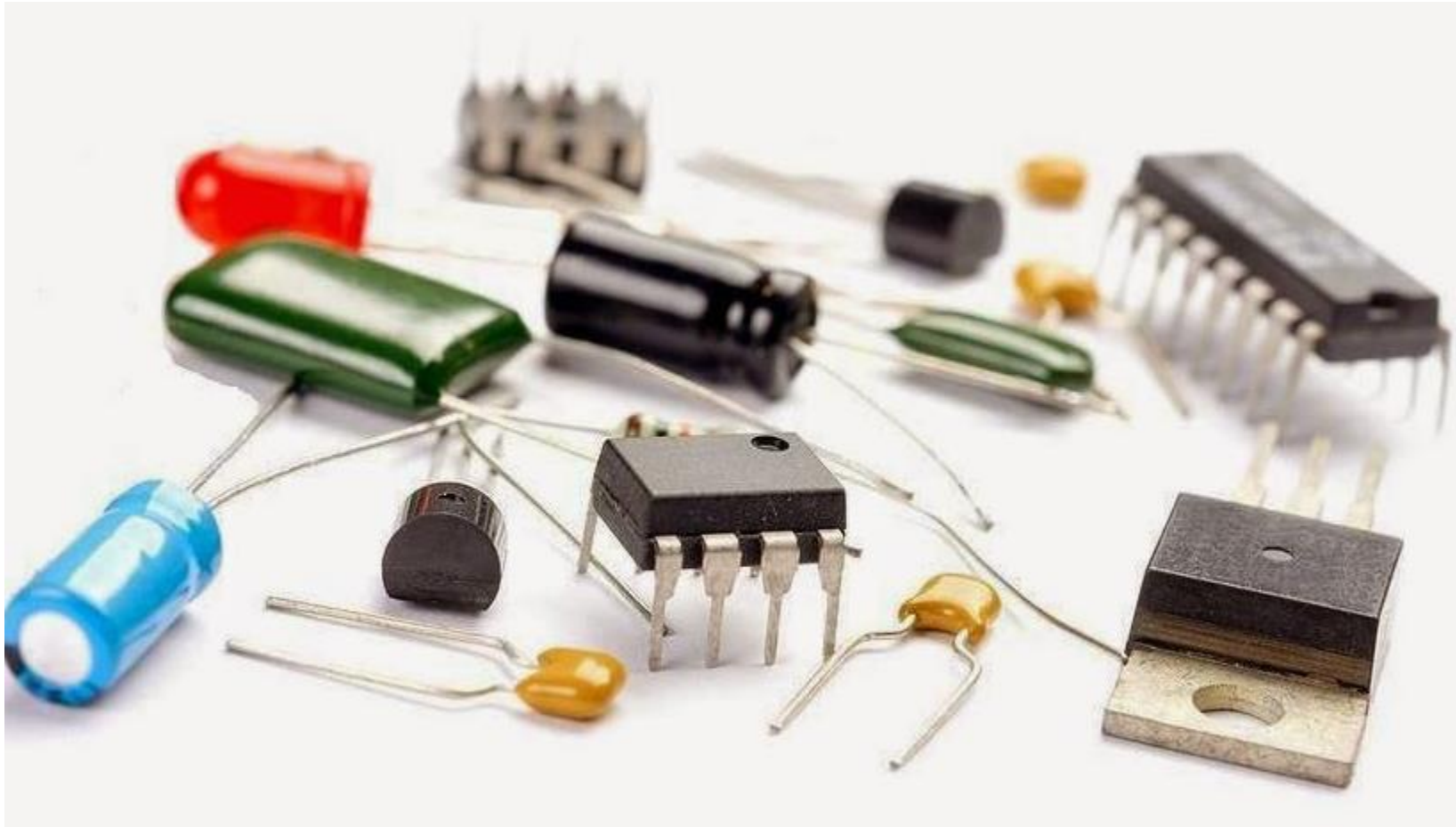
…web component

has structure, state & behaviour

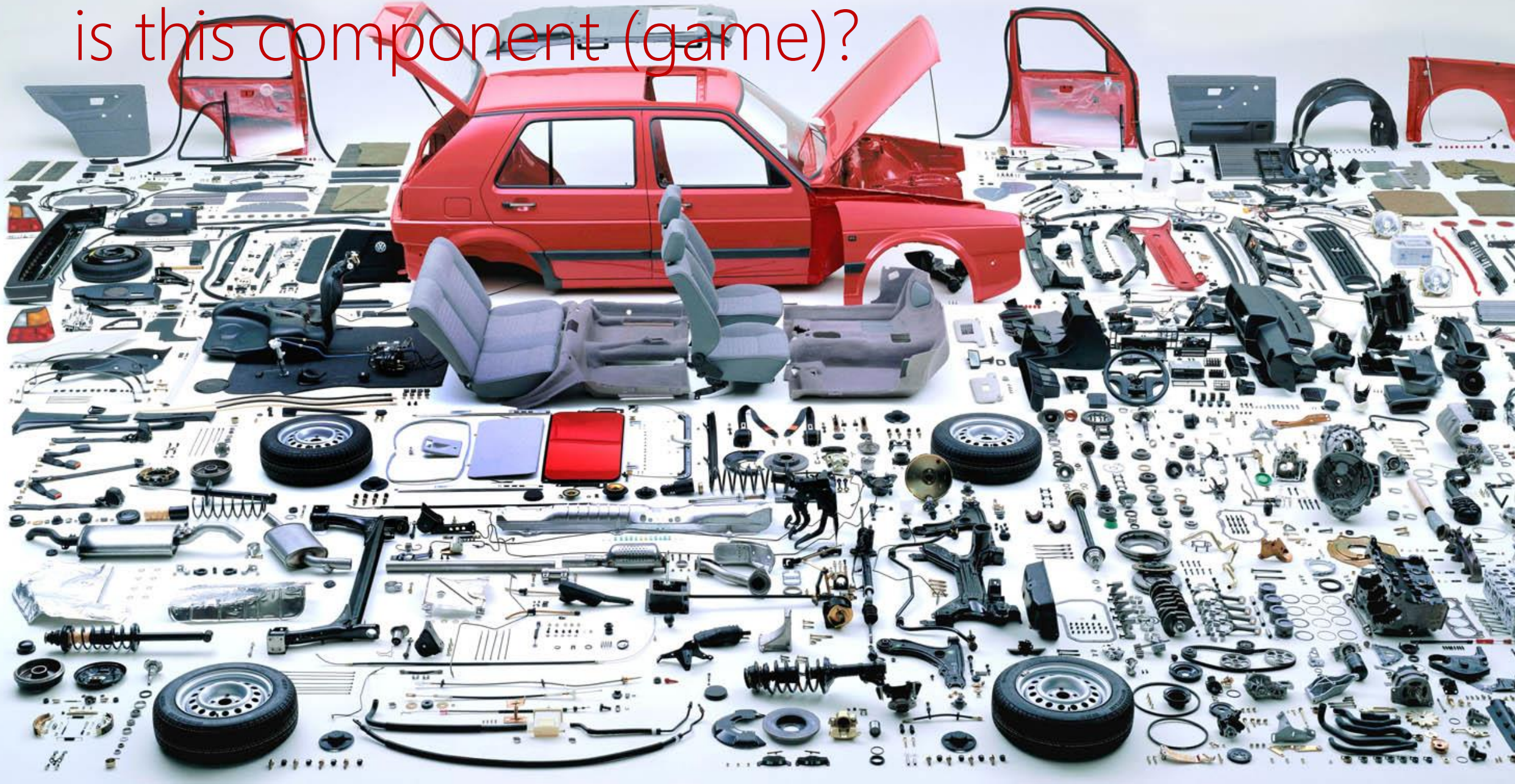
user can interact with…

it’s rendered (visible?)

# is this component (game)?



# is this component (game)?



# is this component (game)?

is this component (game)?

# is this component (game)?

## #WIEM Z ONET

### Członek KRS chce awansować o dwa stopnie. Rzecznik Rady w rozmowie z Onetem: zaskoczyła mnie pani

### "Pograne EXTRA". Szczere wyznanie Pola: ta gra mnie uzależniła, gram już 25 lat

### PiS hojny dla krewnych i znajomych. Z unijnej kasy

### Kolejne szczegóły wielkiego powrotu Roberta Kubicy

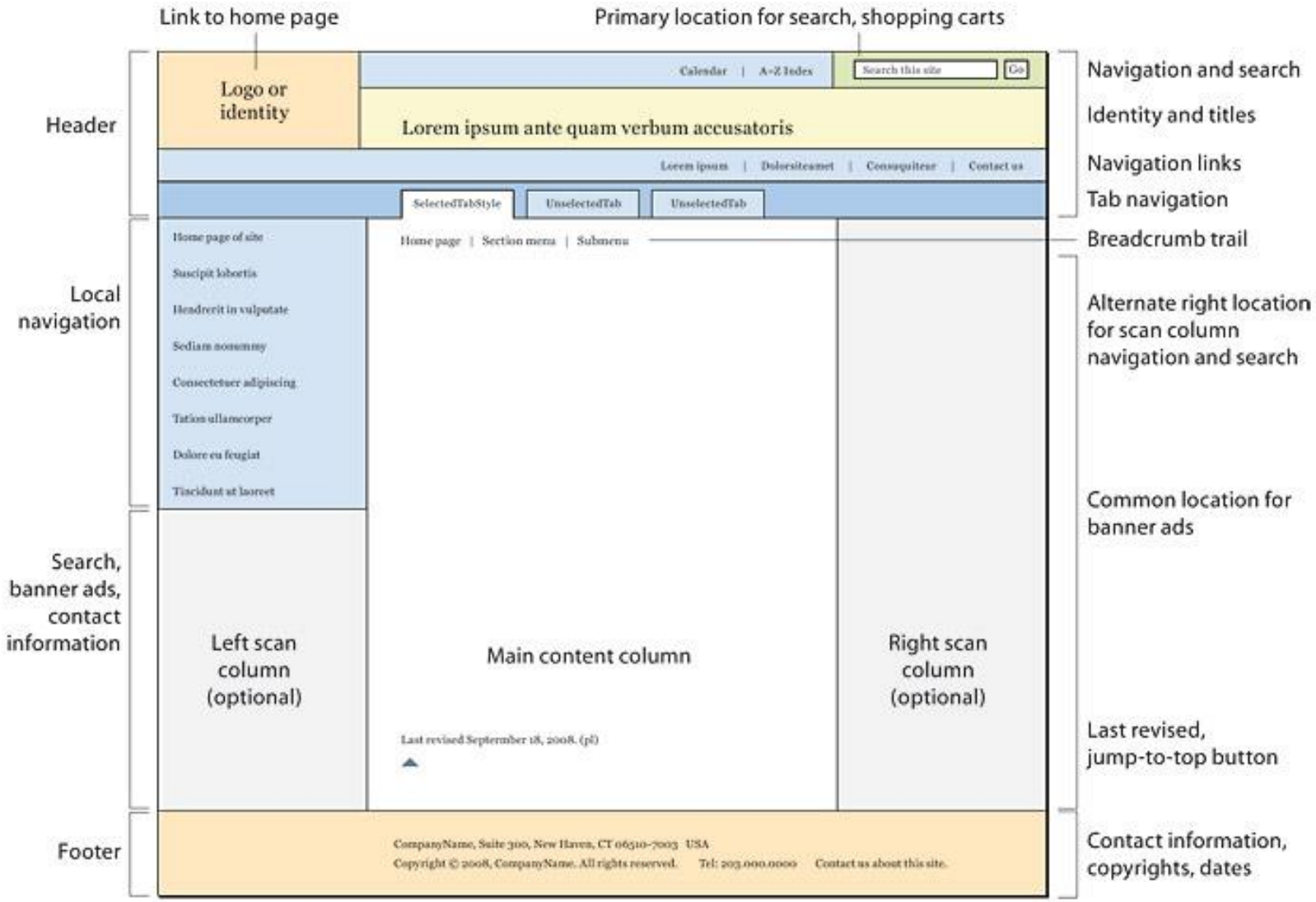
### ME: Dobra pierwsza połowa i koszmar po zmianie stron. Dotkliwa porażka Polek

## WIADOMOŚCI

### Polscy studenci zatrzymani na Cmentarzu Orląt Lwowskich. Finał sprawy

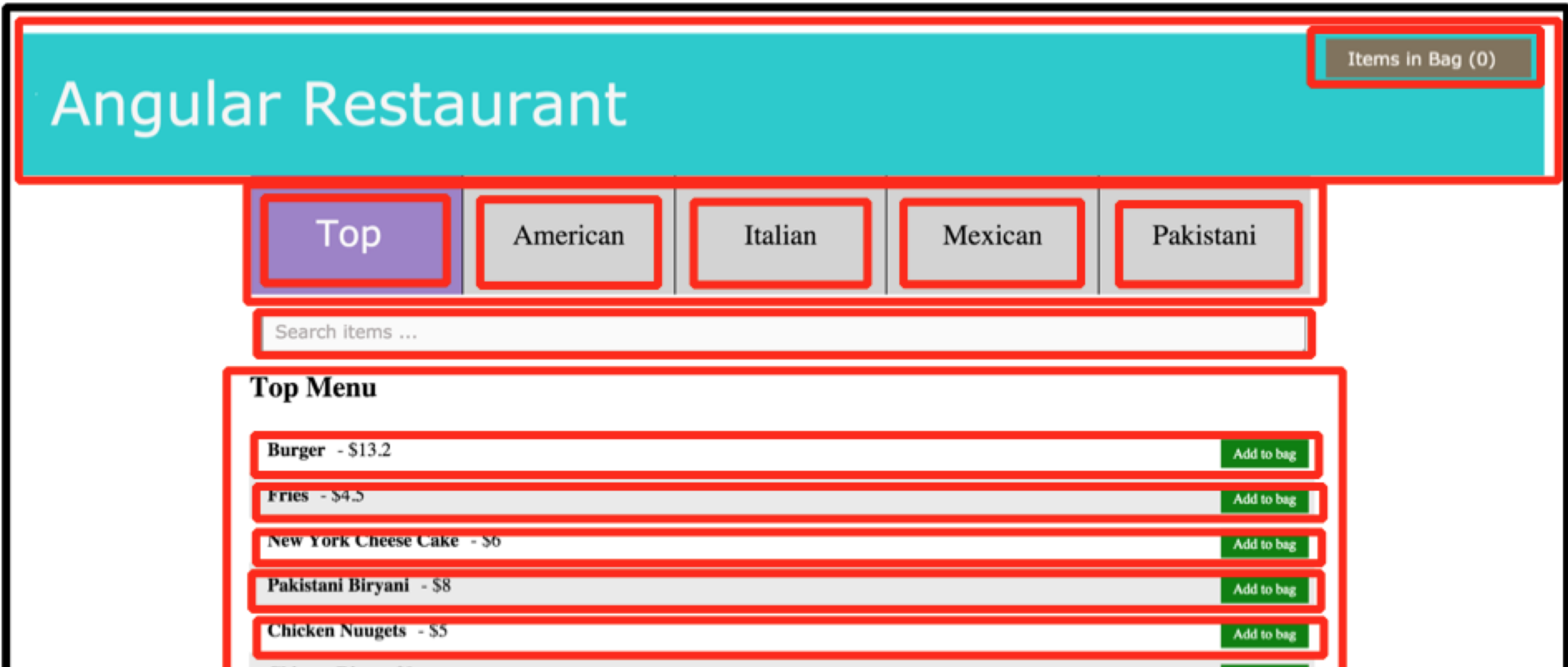
- Ojciec przestał być ministrem, powołano jego syna
- PiS hojny dla krewnych i znajomych z kasy UE
- Owsiak o wyroku sądowym: przeprosiny będą
- Ambasador USA o błędach w swoim liście do premiera: jestem tym zażenowana
- 40 tys. zł zniknęło ze szkoły. List gończy za matką
- Neumann: ścieżka do polexitu jest faktem
- Alaska: silne trzęsienie ziemi, duże zniszczenia
- Uwaga na silny mróz. IMGW wydaje ostrzeżenia
- Papież: martwi mnie homoseksualizm wśród księży
- Komentarze po słowach Neumanna w Onet Opinie. Schetyna odpowiada na wpis Andrzeja Dudy
- Program "Ameryka Express" był hitem TVN-u
- Nietypowa akcja policji z Adamem Małyszem
- Putin ostrzega przed nowym "wyścigiem zbrojeń"
- Nietypowe przywitanie z Putinem hitem w sieci
- Jak zginęła ostatnia miłość Piłsudskiego?

# component hierarchy (decomposition)



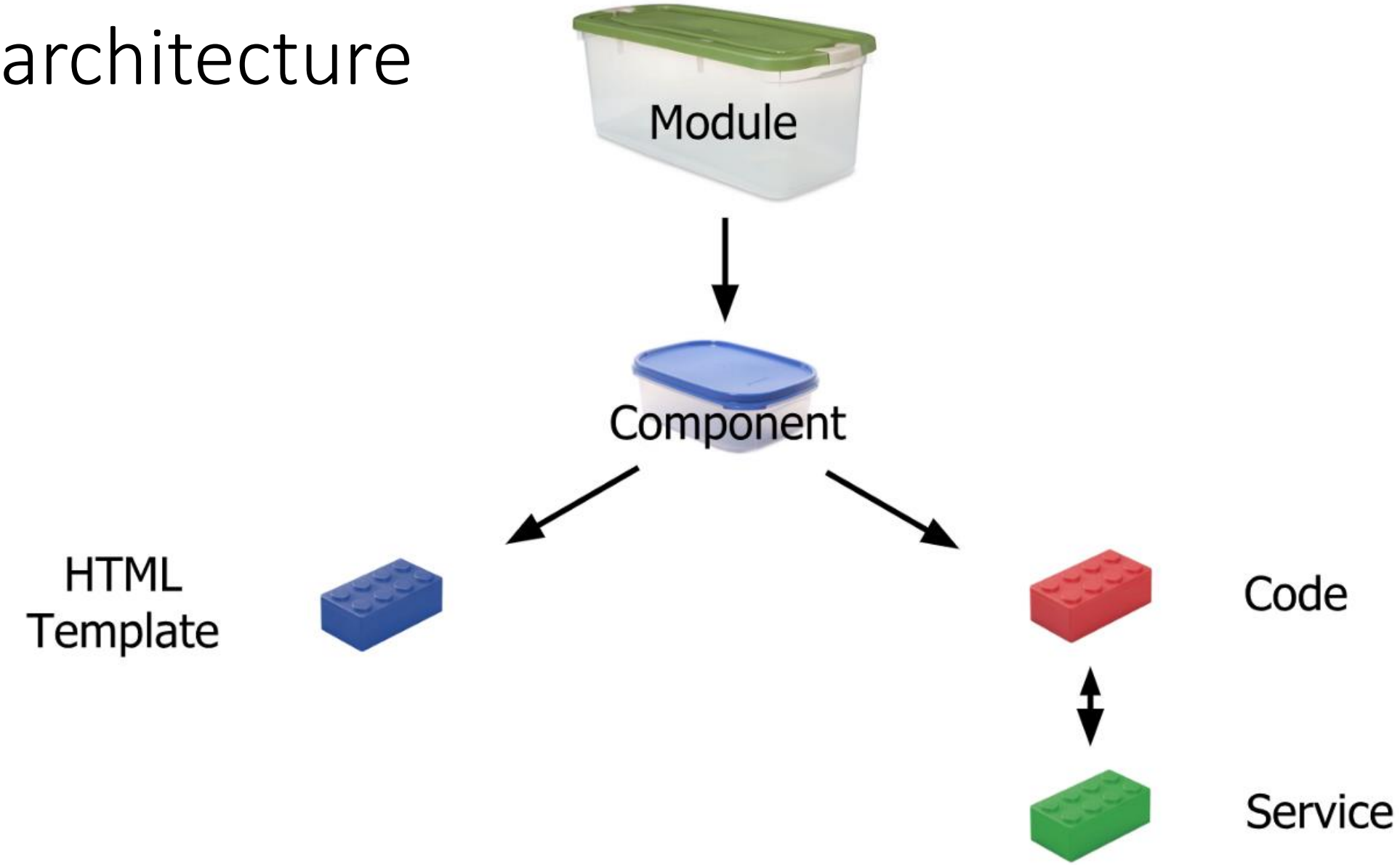
# page as component

# page as component



angular architecture

# architecture

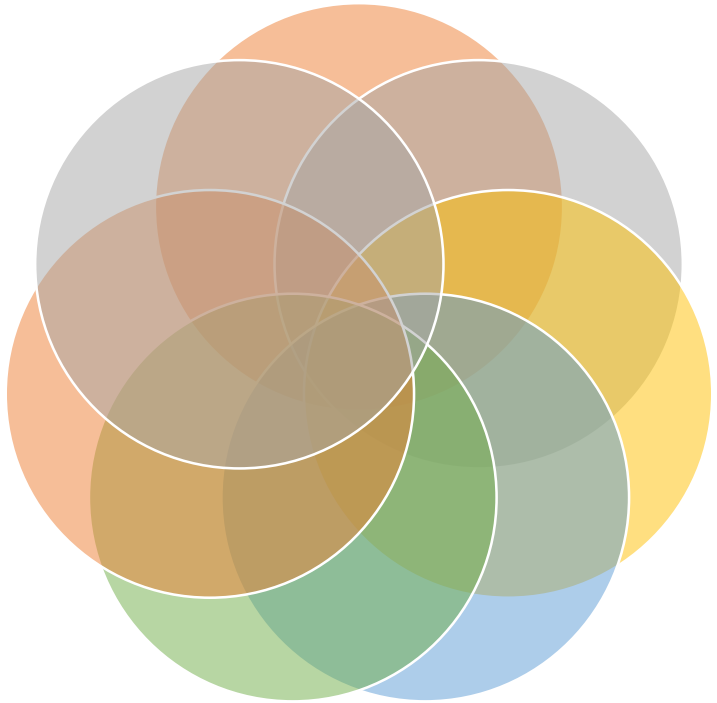


# angular features

custom components

routing

modularization



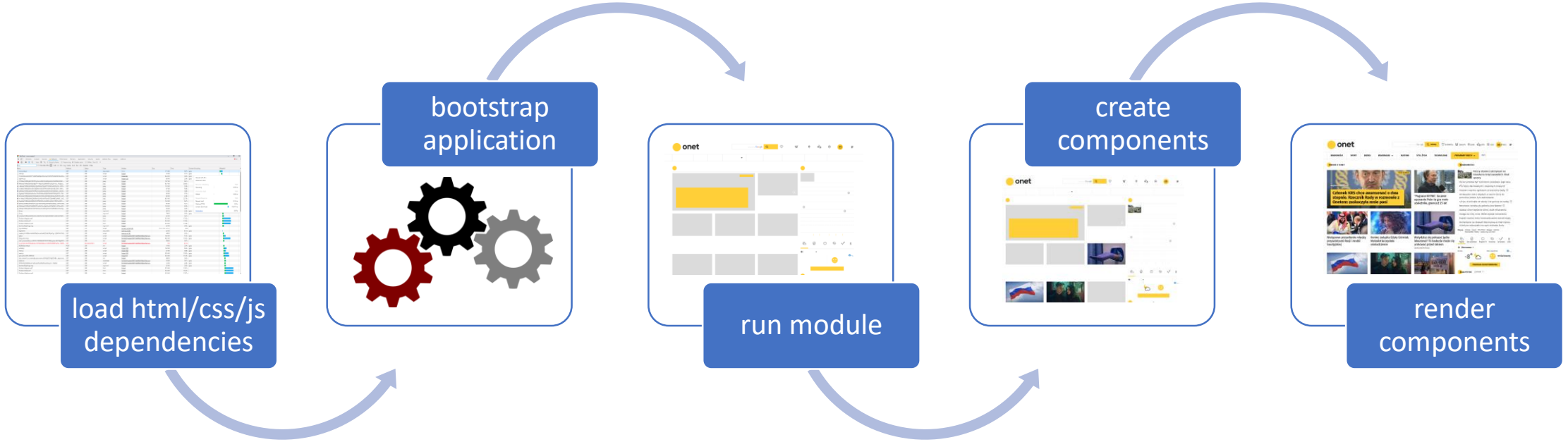
build-in directives

dependency injection (providers)

services/pipes/...

data binding

# angular app start



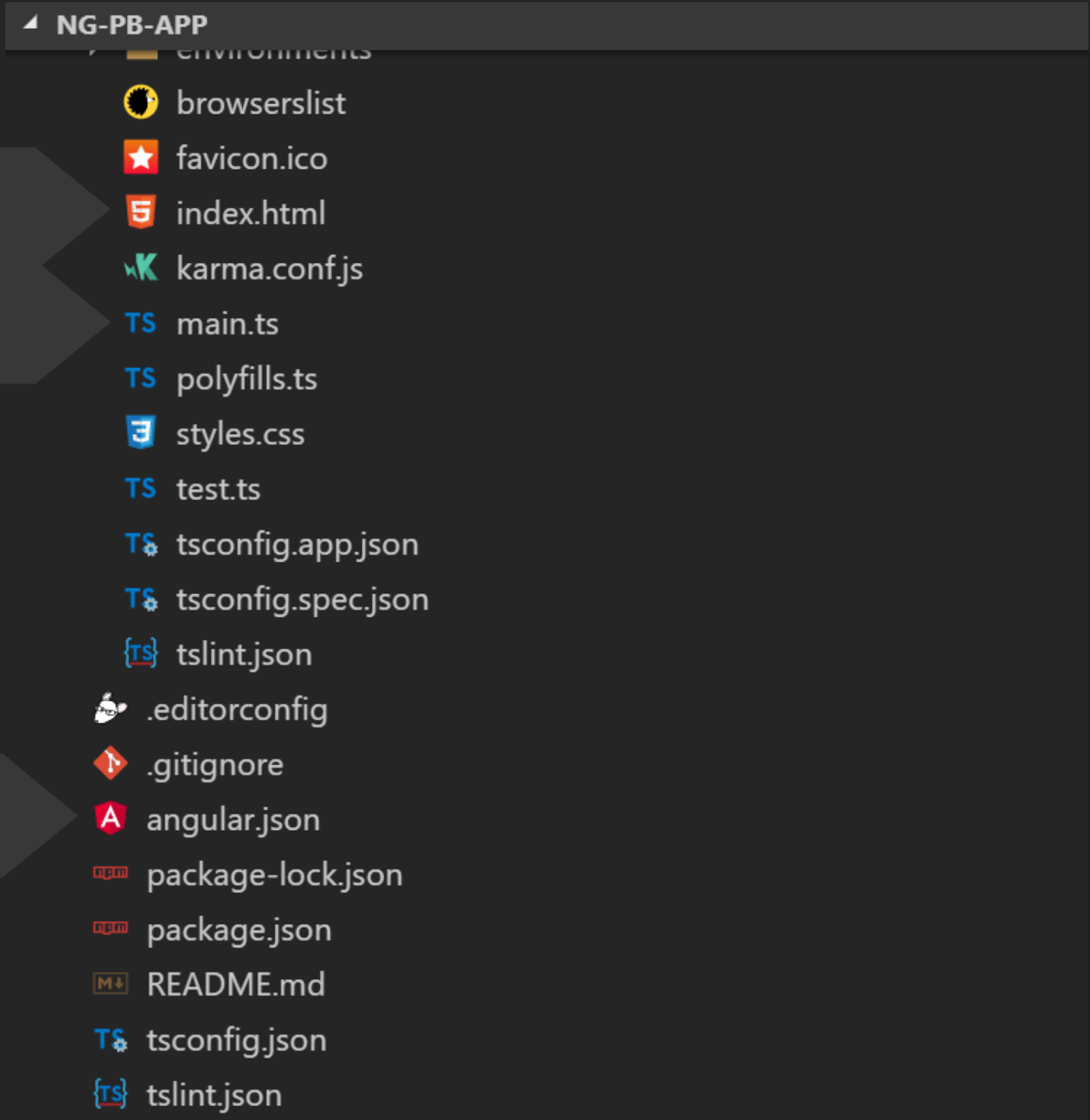
# where is angular?

# structu

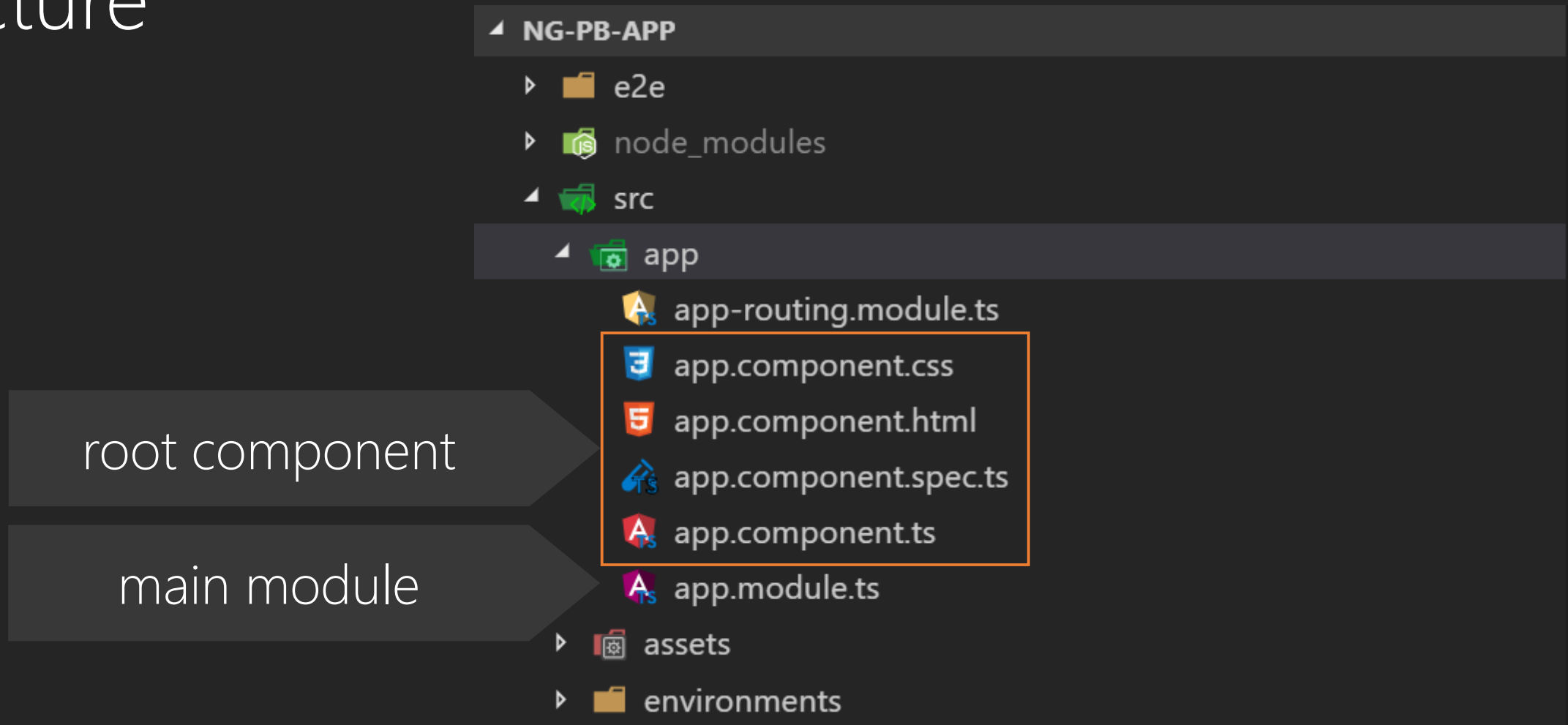
root HTML (host)

app entry point

angular cli config



# structure


NG-PB-APP
e2e
node_modules
src
app
app-routing.module.ts
app.component.css
app.component.html
app.component.spec.ts
app.component.ts
app.module.ts
assets
environments
root component
main module

# root HTML (host) - index.html

```
<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>NgPbApp</title>
  <base href="/">

  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
</head>
<body>
  <app-root></app-root>
</body>
</html>
```

root component

# entry point – main.ts

```
import { enableProdMode } from '@angular/core';
import { platformBrowserDynamic } from '@angular/platform-browser-dynamic';

import { AppModule } from './app/app.module';
import { environment } from './environments/environment';

if (environment.production) {
  enableProdMode();
}

platformBrowserDynamic().bootstrapModule(AppModule)
  .catch(err => console.error(err));
```

bootstrapping

# main module - app.module.ts

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

import { AppRoutingModule } from './app-routing.module';
import { AppComponent } from './app.component';

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

bootstrapped component

# root component - app.component.ts

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

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'ng-pb-app';
}
```

# component fundamentals

```
import { Component, OnInit } from '@angular/core';
component decorator
@Component({
  selector: 'app-test-item',   selector name
  templateUrl: './test-item.component.html',   template & style
  styleUrls: ['./test-item.component.css']
})
export class TestItemComponent implements OnInit {

  constructor() { }

  ngOnInit() {   component internals
  }

}
```

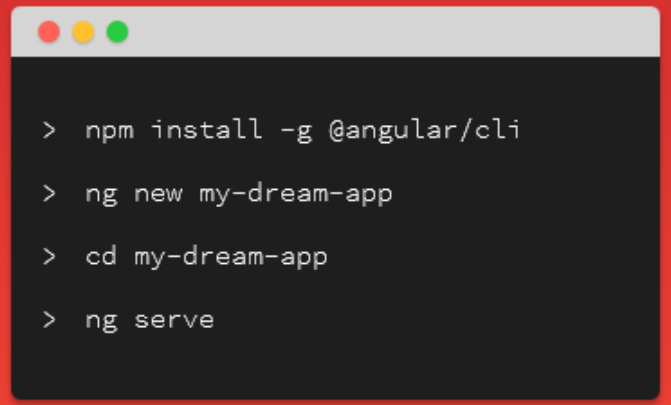
**pencil** /'pens(ə)l/ —n.
writing or drawing
graphite etc. enclos
cylinder or metal cas
bling a pencil in shap
(-ll-; US -l-) 1 write, dr

Angular CLI

https://cli.angular.io/

ANGULAR DOCUMENTATION GITHUB

CLI




# Angular CLI

A command line interface for Angular

GET STARTED

## ng new

The Angular CLI makes it easy to create an application that already works, right out of the box. It already follows our best practices!

## ng generate

Generate components, routes, services and pipes with a simple command. The CLI will also create

# questions?

kamil.mijacz@gmail.com

kamil.mijacz@softwarehut.com