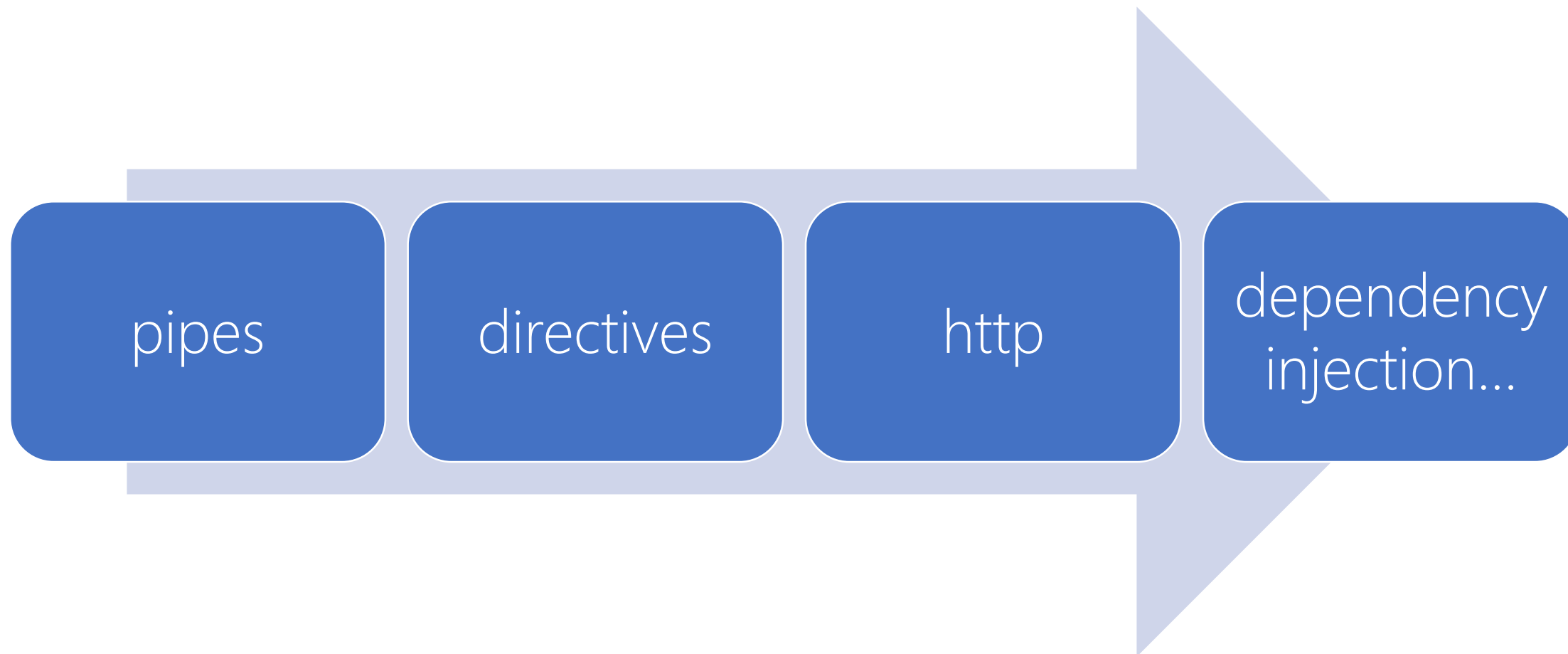
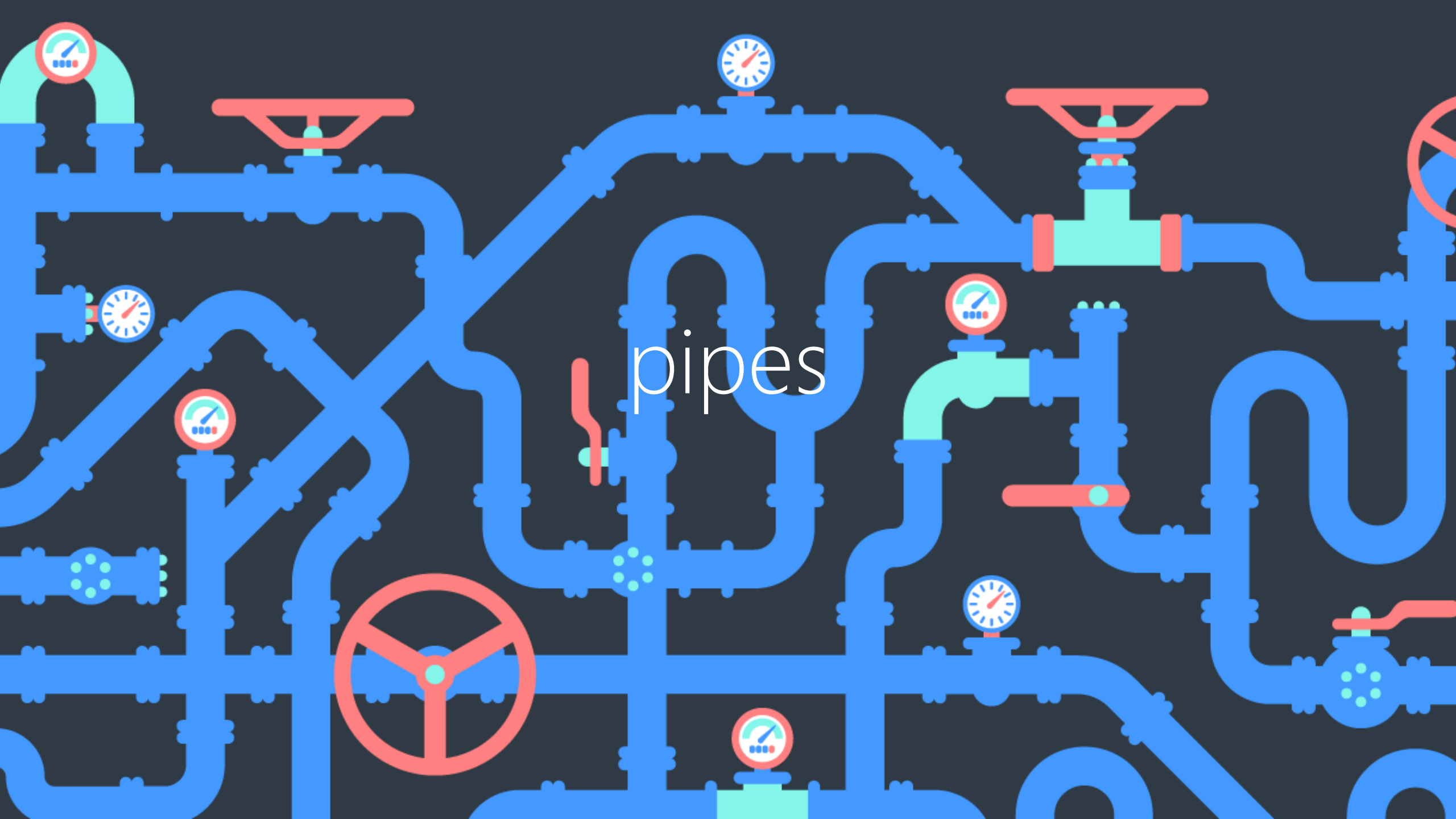




part 7

plan





pipes

what is pipe?

classes

prepare data for display

transforming text into another

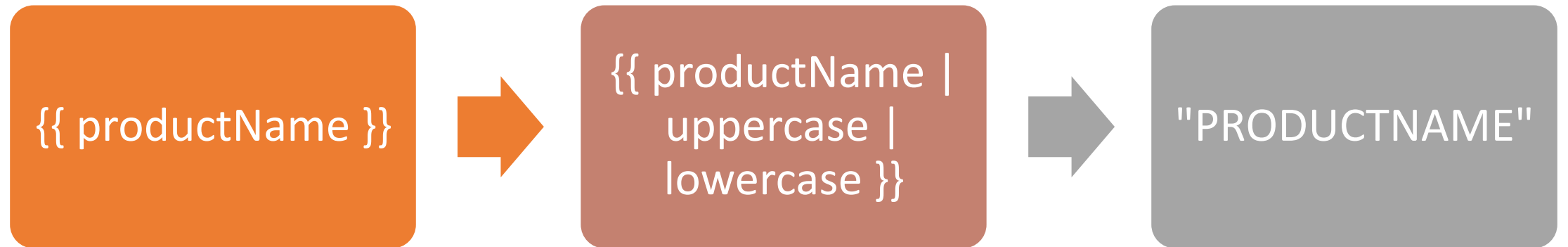
@Pipe decorator

for code reuse

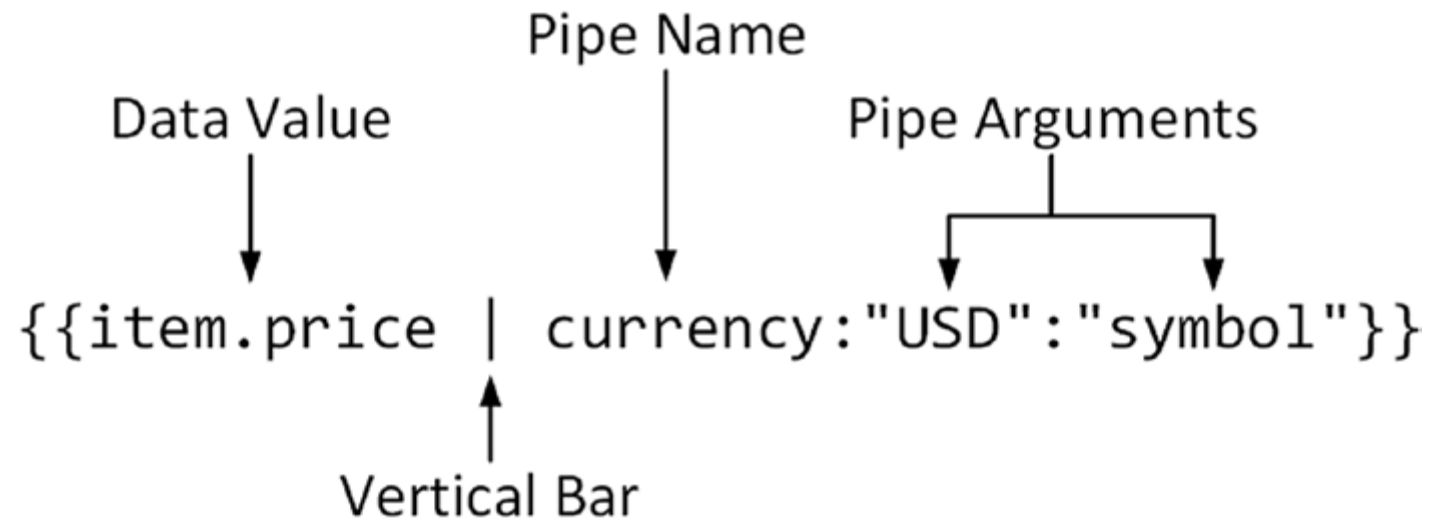
understanding pipe



understanding pipe



understanding pipe



types of pipes

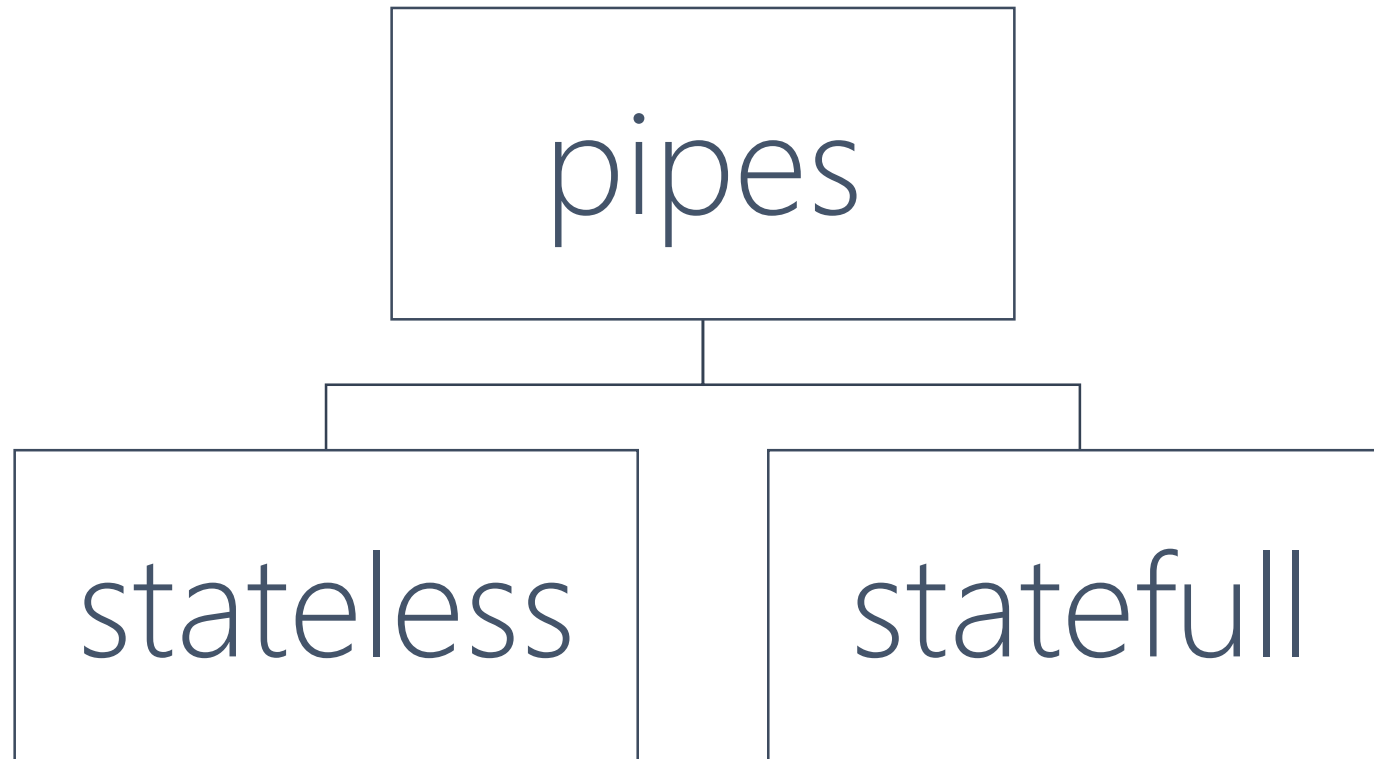
pipes (chained, with parameters)

```
graph TD; A[pipes (chained, with parameters)] --> B[build-in]; A --> C[custom];
```

build-in

custom

types of pipes



examples


```
{{ 'Hello World' | uppercase }}  
{{ 'hELLO wORLD' | lowercase }}  
{{ 'jOHN' | titlecase }}  
{{ currentDate | date }}  
{{ currentDate | date:'shortDate' }}  
{{ '12.123456' | number }}  
{{ 150 | currency:'GBP' }}  
{{ complexObject | json }}  
...
```

custom pipe

```
import { Pipe, PipeTransform } from '@angular/core';

@Pipe({ name: 'fileSize' })
export class FileSizePipe implements PipeTransform {

  transform(bytes: number = 0, decimals: number = 2): string {
    if (bytes === 0) return '0 Bytes';
    const k = 1024, dm = decimals || 2,
    sizes = ['Bytes', 'KB', 'MB', 'GB', ...];
    i = Math.floor(Math.log(bytes) / Math.log(k));
    return parseFloat((bytes / Math.pow(k, i)).toFixed(dm)) + ' ' + sizes[i];
  }
}
```



DIRECTIVE

directives

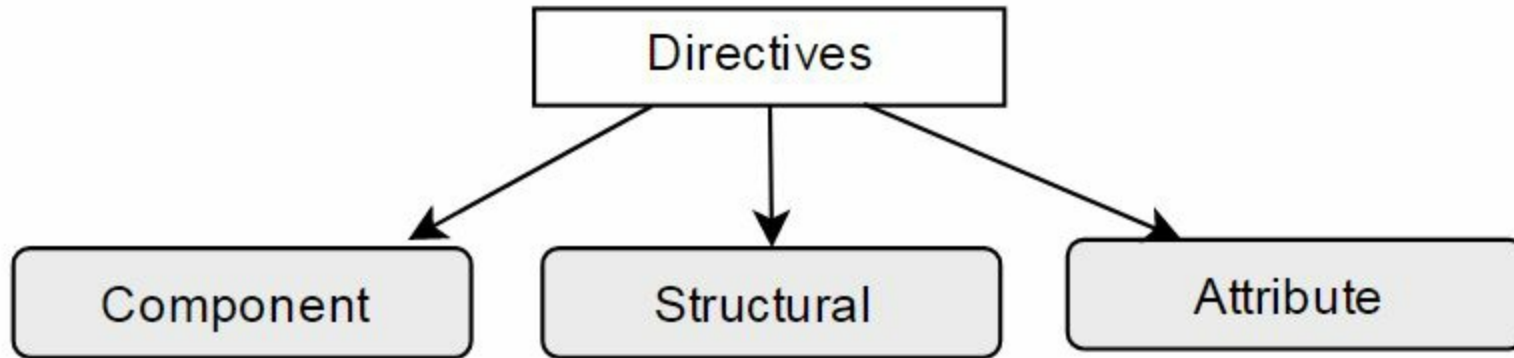
extend the behavior of the elements

can manipulate DOM

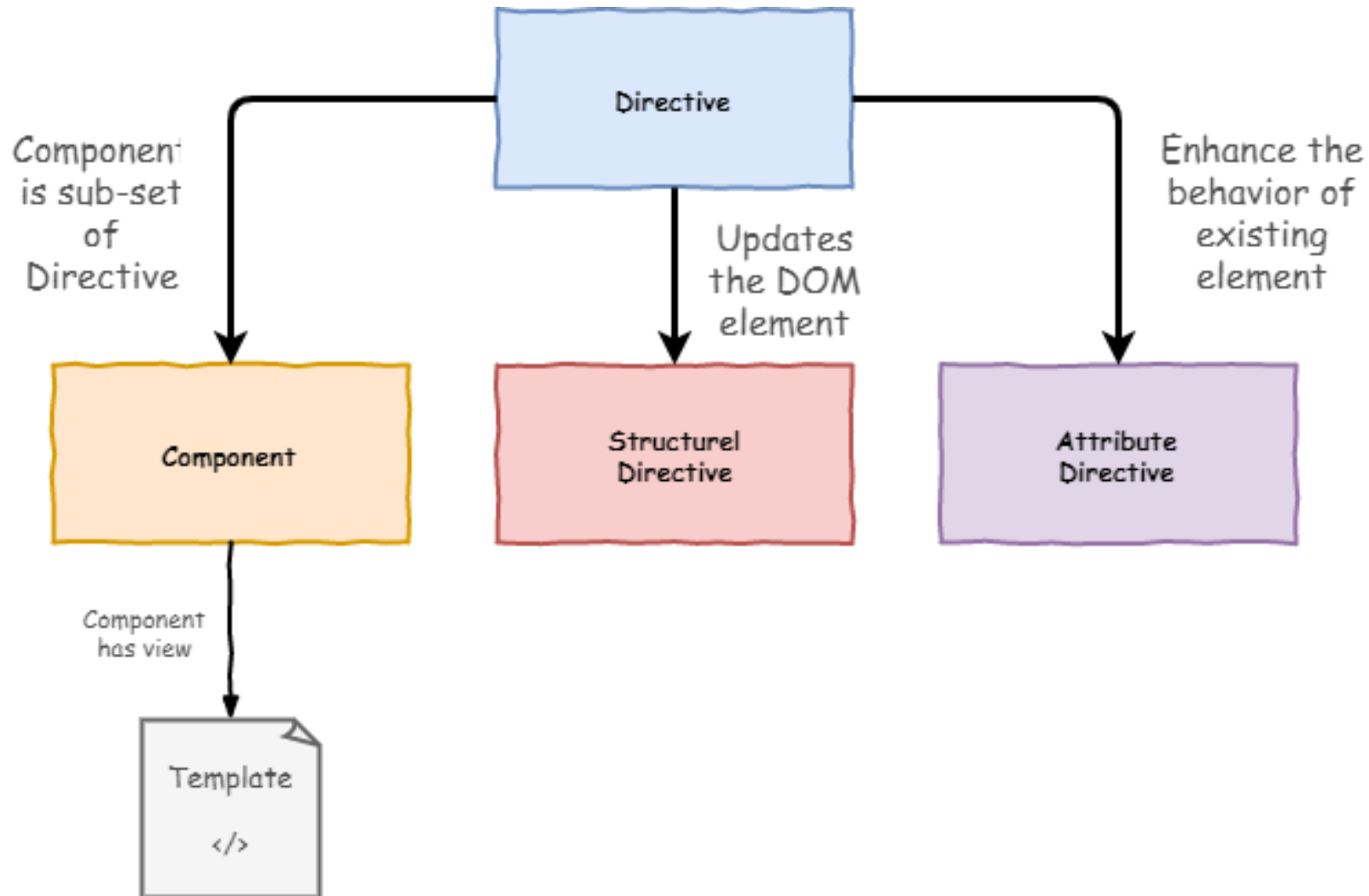
@Directive

3 types

directive types



directive types



directive types

components

- directives with a template

structural directives

- change the DOM layout by adding and removing DOM elements

attribute directives

- change the appearance or behavior of an element/component/directive

<https://angular.io/guide/cheatsheet>

Built-in directives

```
<section *ngIf="showSection">
```

```
<li *ngFor="let item of list">
```

```
<div [ngSwitch]="conditionExpression">  
<ng-template [ngSwitchCase]="case1Exp">...</ng-template>  
<ng-template ngSwitchCase="case2LiteralString">...</ng-template>  
<ng-template ngSwitchDefault>...</ng-template>  
</div>
```

```
<div [ngClass]="{'active': isActive, 'disabled': isDisabled}">
```

```
<div [ngStyle]="{'property': 'value'}">  
<div [ngStyle]="dynamicStyles()">
```

custom directive

ng generate directive custom-directive

custom directive

```
<div sizer="72px">  
  {{title}}  
</div>
```

custom directive

```
import {  
    Directive, ElementRef, Renderer  
} from '@angular/core';  
  
@Directive({ selector: '[sizer]' })  
export class SizerDirective {  
...  
    constructor(  
        private element: ElementRef,  
        private renderer: Renderer  
    ) { }  
}
```

custom directive

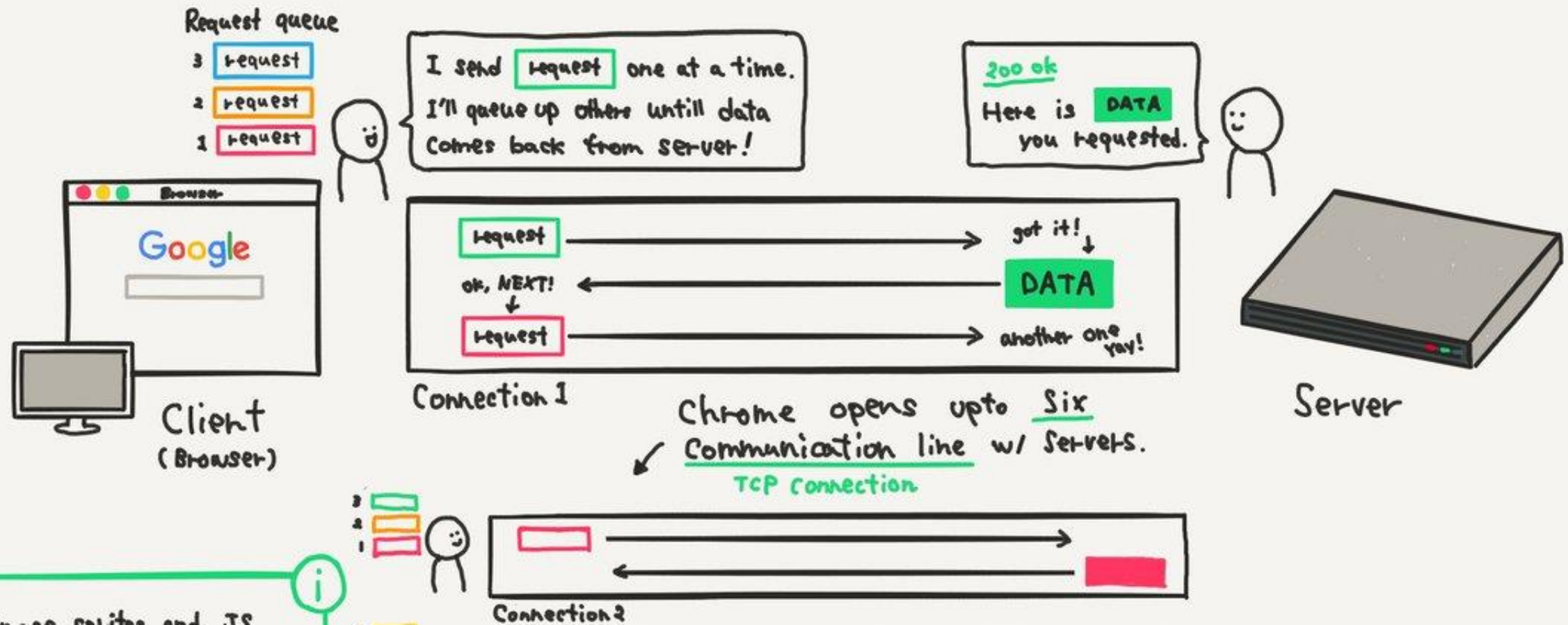
```
@Directive({ selector: '[sizer]' })
export class SizerDirective implements OnInit {
  @Input() sizer: string;

  constructor(private element: ElementRef, private renderer: Renderer)
  { }

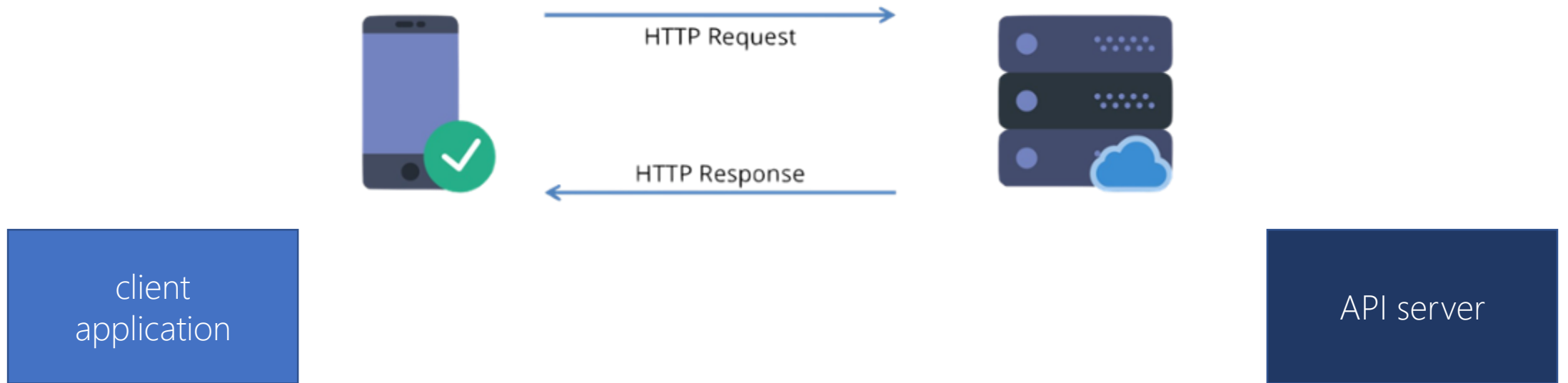
  ngOnInit() {
    this.renderer.setStyle(
      this.element.nativeElement, 'font-size', this.sizer);
  }
}
```

Protocol (Pin HTTP) is a Communication rule between Client (browser) & Server.

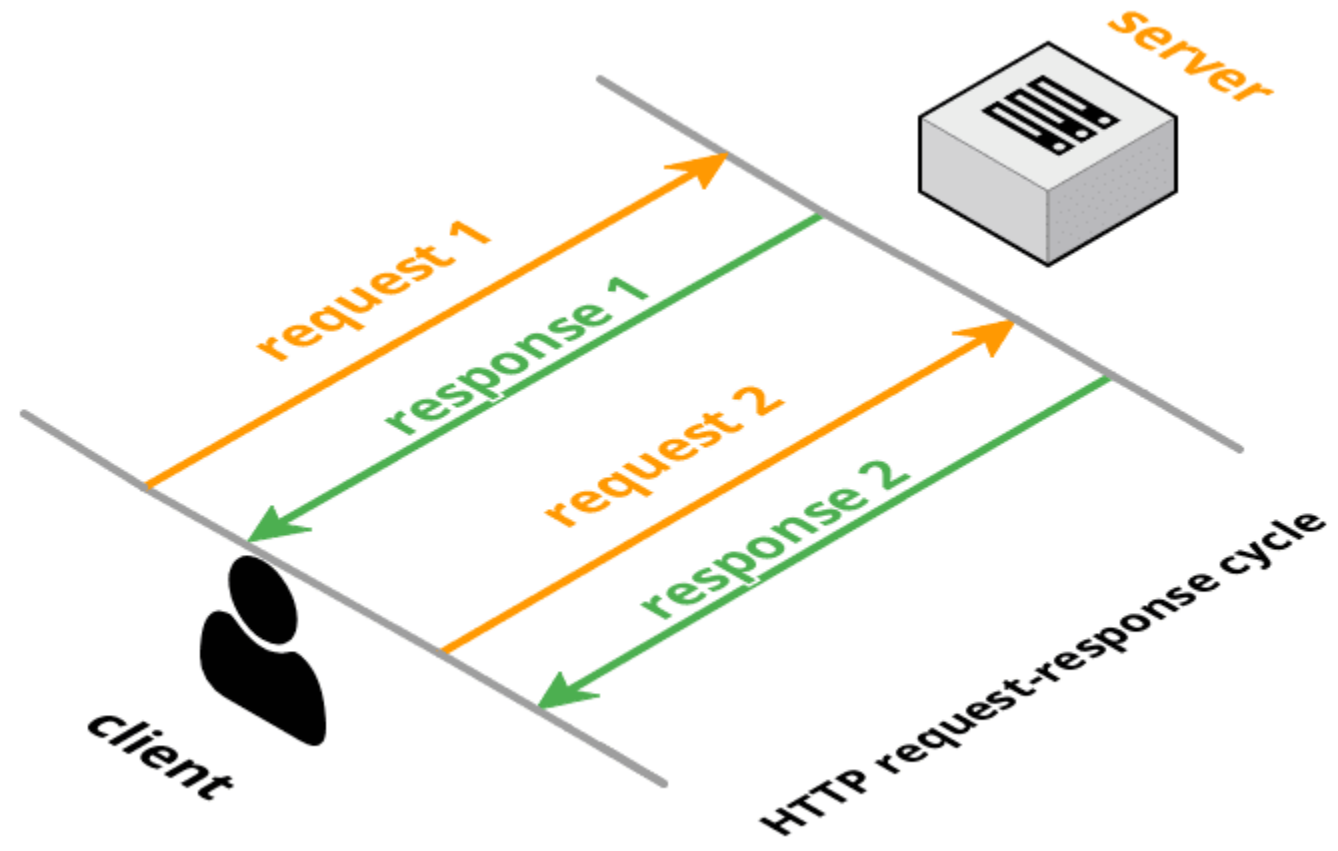
HTTP 1.x



http(s) request/response



http(s) request-response cycle



HTTP methods

POST

- modify

GET

- read

PUT

- modify

DELETE

- delete

HTTP request and response headers

Name	×	Headers	Preview	Response	Timing
<input type="checkbox"/> font-check-blue.77286...	▼ General Request URL: https://www.google-analytics.com/analytics.js Request Method: GET Status Code: ● 200 (from disk cache) Remote Address: [2607:f8b0:4002:807::200e]:443 Referrer Policy: no-referrer-when-downgrade				
<input checked="" type="checkbox"/> analytics.js					
<input type="checkbox"/> fontawesome-webfont...					
<input type="checkbox"/> OpenSans-Light-webf...					
<input type="checkbox"/> OpenSans-Regular-we...					

<input type="checkbox"/> OpenSans-LightItalic-...	▼ Response Headers age: 1109 alt-svc: quic=":443"; ma=2592000; v="39,38,37,36,35" cache-control: public, max-age=7200 content-encoding: gzip content-length: 12343 content-type: text/javascript date: Tue, 27 Jun 2017 00:44:41 GMT expires: Tue, 27 Jun 2017 02:44:41 GMT last-modified: Tue, 06 Jun 2017 00:25:39 GMT server: Golfe2	
<input type="checkbox"/> OpenSans-Semibold-...		
<input type="checkbox"/> OpenSans-Italic-webf...		
<input type="checkbox"/> header-background.4c...		
<input type="checkbox"/> data:image/png;char...		
<input checked="" type="checkbox"/> logo_sprite.7d36c4a14...		
<input checked="" type="checkbox"/> javascript.b28203373c...		
23 requests 39.3KB trans...		

HTTP body

Name	Headers	Preview	Response	Cookies	Timing
<input type="checkbox"/> search?sclient=psy-ab...	1		<pre>{"e": "KLRRWYL_CsTz-AGSmr_ADQ", "c": 1, "u": "https://www.google.com/search?"}</pre>		
<input type="checkbox"/> gen_204?s=web&atyp...					
<input type="checkbox"/> t					
<input type="checkbox"/> measurement?jaid=AJ...					

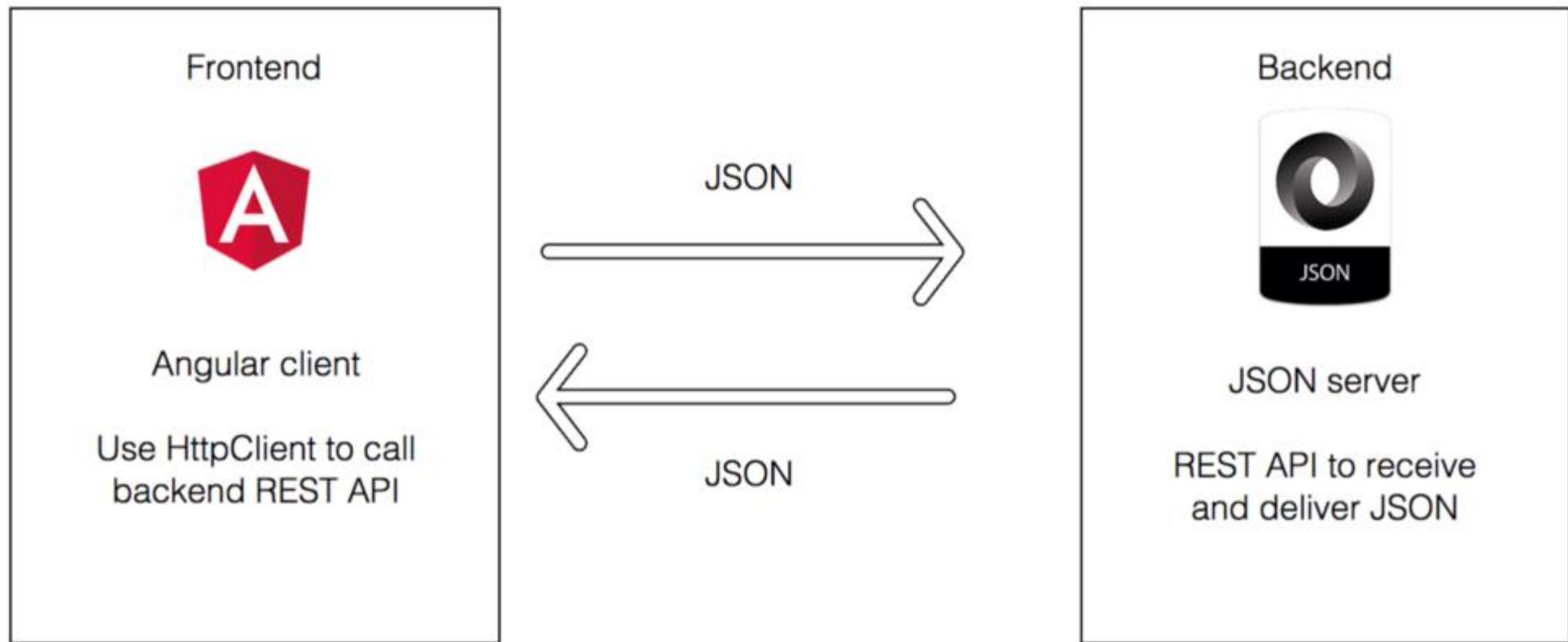
HTML

JSON

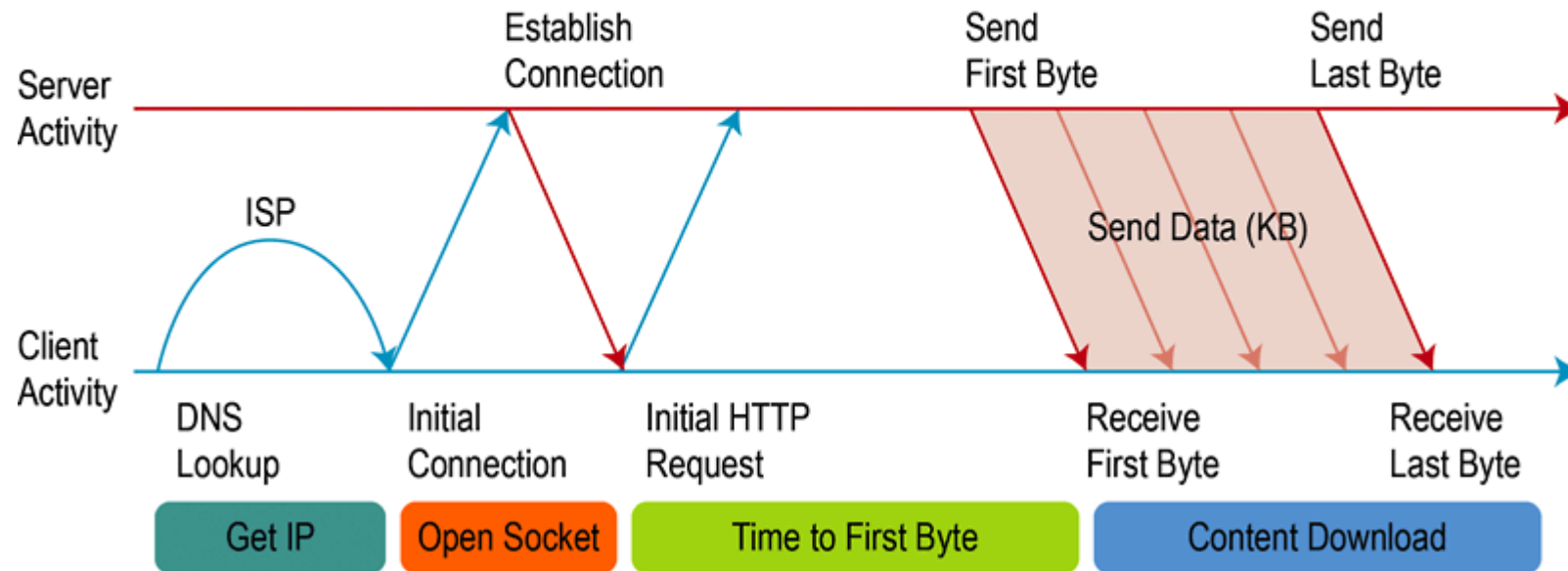
XML

Binary

HTTP communication



The HTTP Request



REST Resource Addressability

`<api_url>/<resource-collection>/ [<id>]`

The server where the
API is hosted

The resource collection to be accessed

Optional parameter to
identify the resource

`http://pizzaService/pizzas/1`

GET	/pizzas	List all pizzas
POST	/pizzas	Create a pizza
GET	/pizzas/1	Get pizza 1
PUT	/pizzas/1	Update pizza 1
DELETE	/pizzas/1	Delete pizza 1

angular http communication

```
import {  
    HttpClientModule  
} from '@angular/common/http';
```

angular http communication

```
export class PizzaService {  
    ...  
}
```

```
export class Pizza {  
    ...  
}
```


angular http communication

```
private url = 'http://pizzaService';  
private endpoint = 'pizzas';
```

```
constructor(  
    protected httpClient: HttpClient  
) { }
```

angular http communication

```
list(): Observable<Pizza[]> {  
    return  
        this.httpClient.get<Pizza[]>(  
            `${this.url}/${this.endpoint}`  
        );  
}
```

angular http communication

```
read(id:number): Observable<Pizza> {  
    return  
        this.httpClient.get<Pizza>(  
            `${this.url}/${this.endpoint}/${id}`  
        );  
}
```

angular http communication

```
public create(pizza: Pizza): Observable<Pizza>{  
    return  
        this.httpClient.post<Pizza>(  
            `${this.url}/${this.endpoint}`, pizza  
        );  
}
```




<https://github.com/Banndzior>

#slack

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