

# Angular Training

**Beginner Level**

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# What is Angular

Angular is a JavaScript framework. It is used for building client-side mobile and desktop web applications using HTML, CSS and JavaScript or TypeScript. All the Angular applications are Single Page Applications (SPA's).

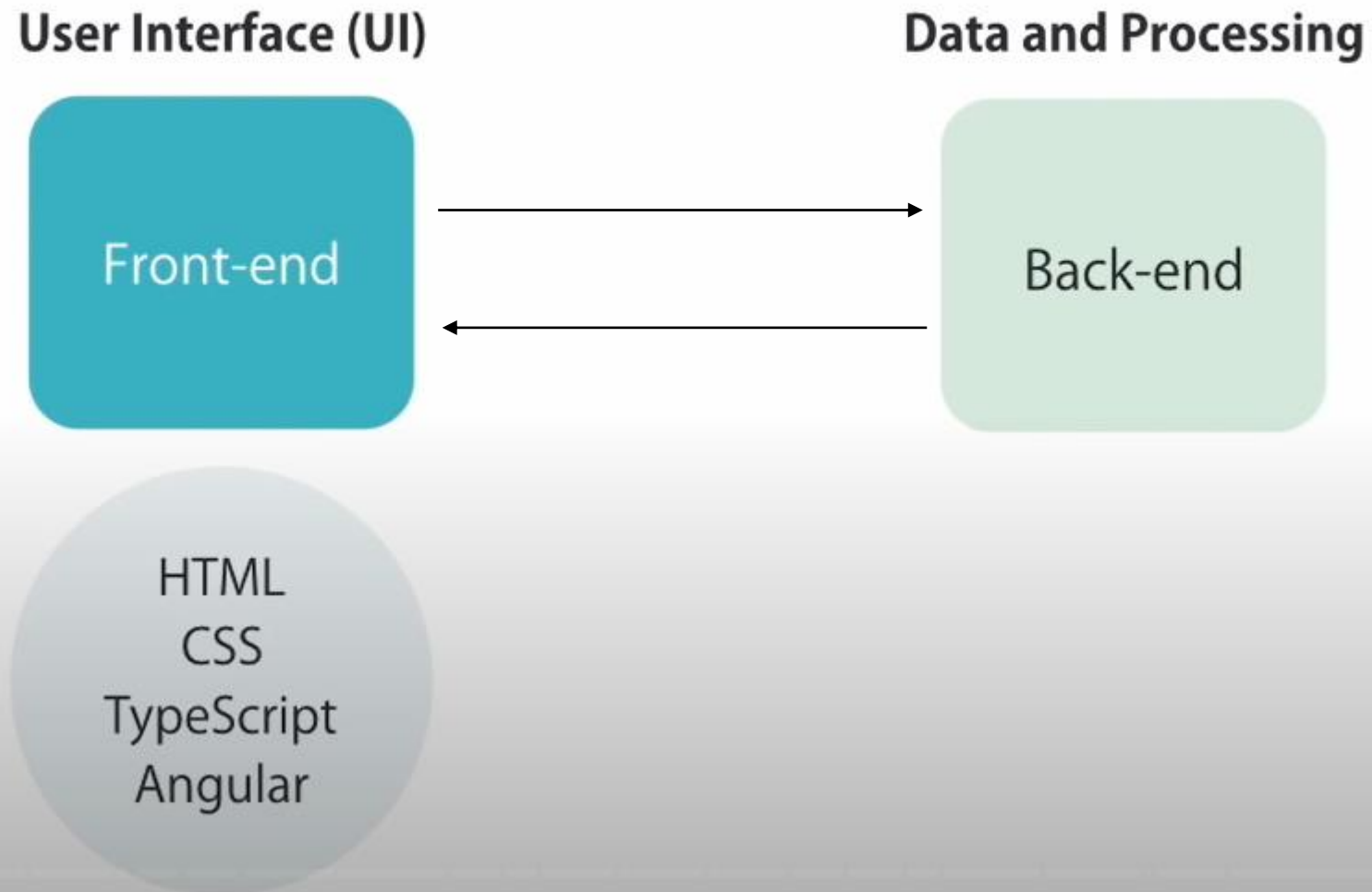
# Setup:

- Node Version:  
`node --version`
- OPTUM's npm registry:  
`npm config set registry https://repo1.uhc.com/artifactory/api/npm/npm-virtual/ --global`
- Angular setup:  
`npm install -g @angular/cli`

# Angular Features

- Modular approach
- Code Reusability
- Inbuilt Utility Code
- Unit Testing

# Angular Architecture (High Level)

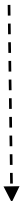


# Angular History & Versions

Developed By : Google

2010 – Angular JS

2016 – Angular 2



2021 – Angular 12

# JavaScript Quiz

Link:

# Create a workspace and initial application

Cmd: `ng new my-app`

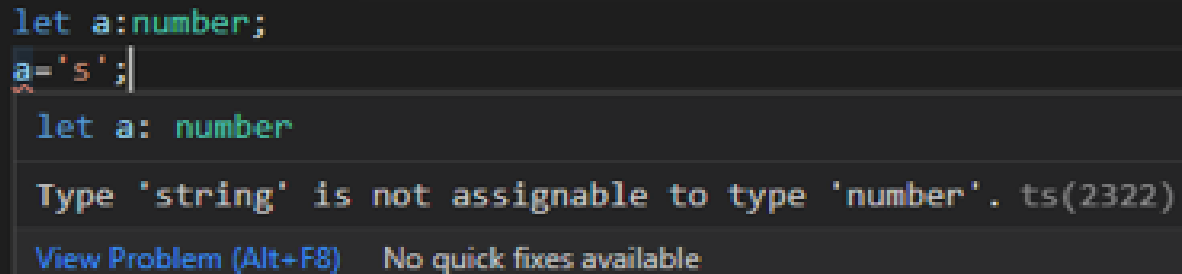
- No for strict type checking.
- Select Yes(Y) for Routing.
- Select SCSS for Styling.
- Download VS code Editor.  
Link: <https://code.visualstudio.com/download>



# TypeScript Overview

- TypeScript is a typed superset of JavaScript that compiles to plain Javascript
- TypeScript is JavaScript's runtime with a compile-time type checker.
- Aligned with ES development for compatibility.

Eg:

A screenshot of a code editor showing a TypeScript error. The code is: 

```
let a:number;  
a='s';
```

 The second line has a red squiggly line under the 's'. A tooltip shows the variable declaration: 

```
let a: number
```

 Below the tooltip, the error message reads: 

```
Type 'string' is not assignable to type 'number'. ts(2322)
```

 At the bottom of the tooltip, there is a link [View Problem \(Alt+F8\)](#) and the text `No quick fixes available`.

```
let a:number;  
a='s';  
  
let a: number  
  
Type 'string' is not assignable to type 'number'. ts(2322)  
  
View Problem \(Alt+F8\) No quick fixes available
```

# TypeScript Types

```
let a: number;
let b: string;
let c: boolean;
let d: any;
let e: number[] = [1, 2, 3];
let f: any[] = [1, 'two', true, { a: 1 }, false, [1]];
let g: Object = {
  a: 1,
  b: 'two'
};

const defaultIndex = 1;
const select = 'Select';
```

# TypeScript Arrow Functions

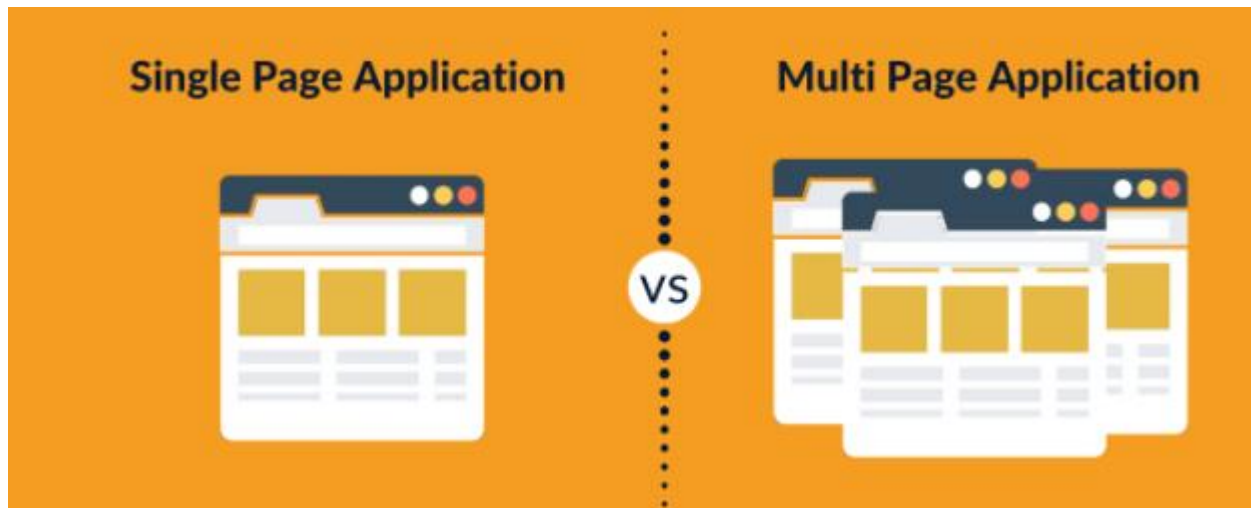
```
// JavaScript Syntax
let logJS = function (text) {
  console.log();
}

// TypeScript Syntax 1
let logTS = function (text: any): void {
  console.log(text);
}

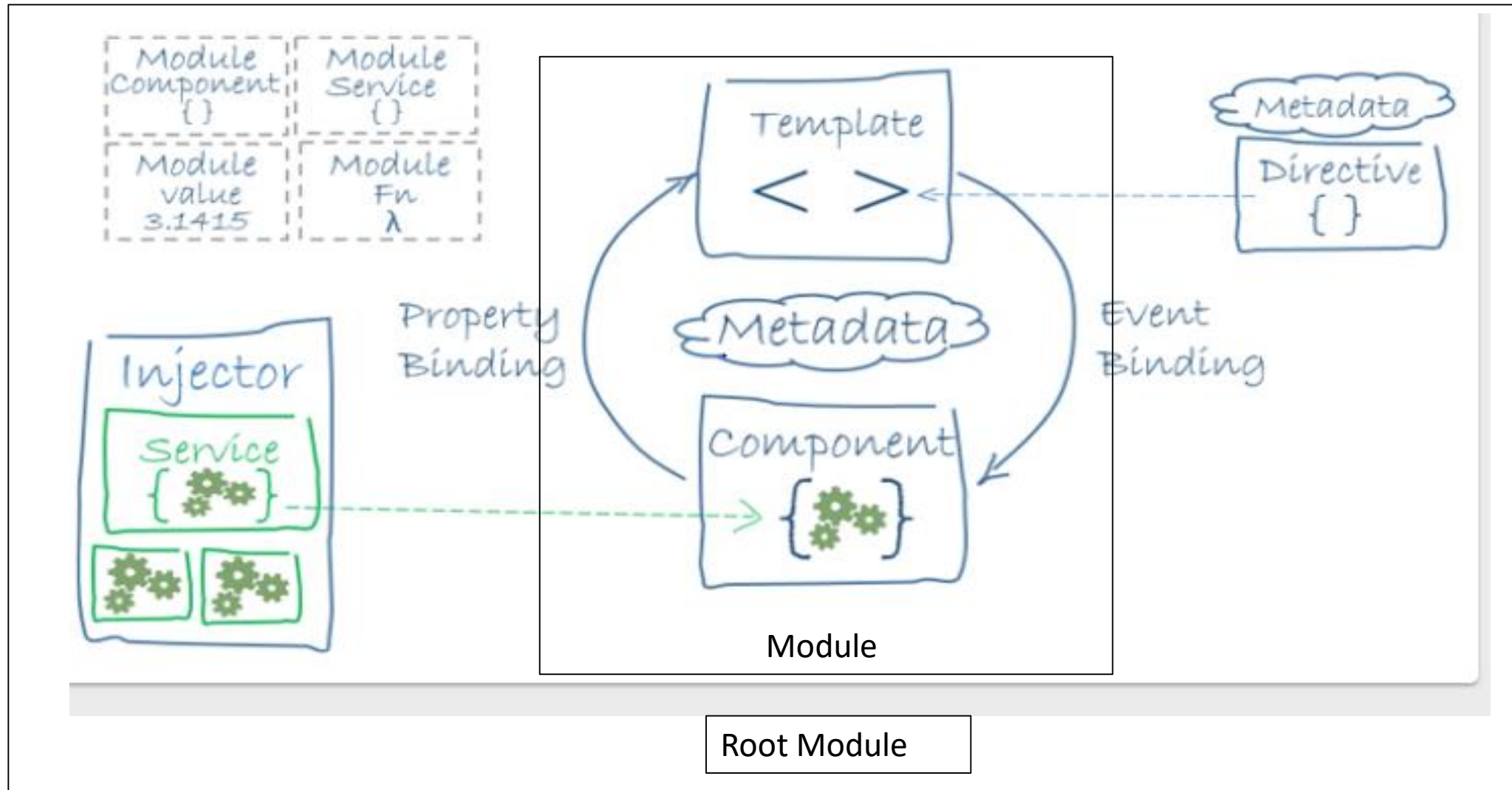
// TypeScript Syntax 2 - using Arrow Functions
let logArrowFuncTS = (text: any): void => {
  console.log(text);
}
```

# What is a SPA?

- Applications that are contained within one web page are called single-page applications (SPA).
- All the views are displayed in one page i.e., “index.html”.



# Angular Architecture



# Lifecycle Hooks

-- Lifecycle Hook Log --

#1 name is not known at construction

#2 OnChanges: [REDACTED]

#3 OnInit

#4 DoCheck

#5 AfterContentInit

#6 AfterContentChecked

#7 AfterViewInit

#8 AfterViewChecked

#9 DoCheck

#10 AfterContentChecked

#11 AfterViewChecked

#12 DoCheck

#13 AfterContentChecked

#14 AfterViewChecked

#15 OnDestroy

# Dependency Injection

