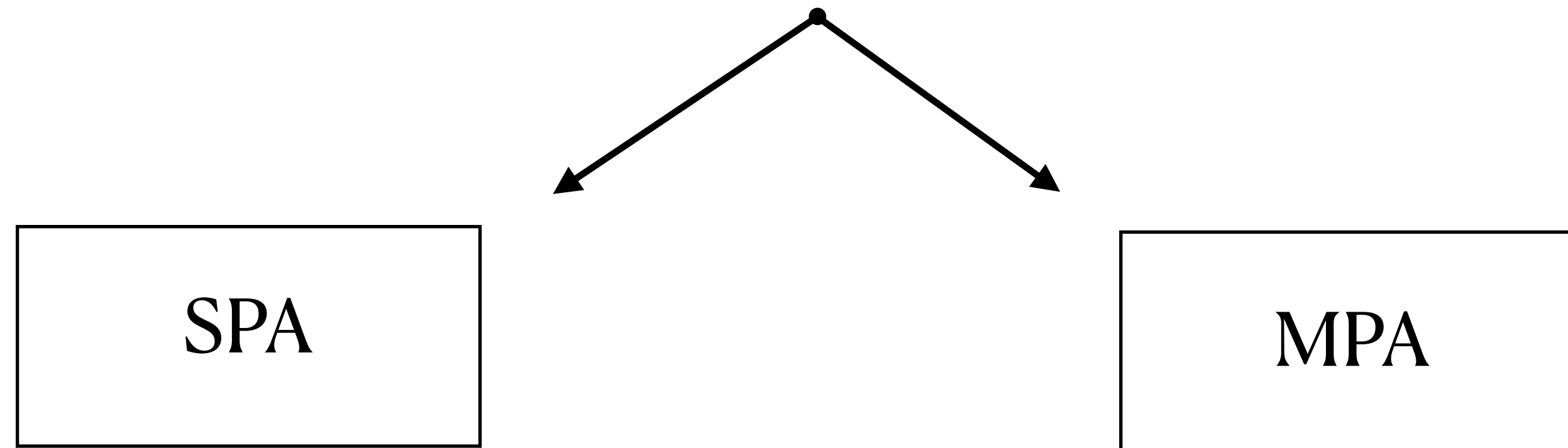# Angular 15.3

Intro course

Mahmoud Ibrahim

Web Applications Types

SPA

MPA

SPA vs MPA

Single Page Application

- Initial loading

- User experience smoother

- Development && Maintenance

- SEO (Search Engine Optimisation)

- SSR (Server Side Rendering)

- Hydration (Advanced Topic)

- Resource Consumption

- PWA (Progressive web application)

SPA (Single page application)
Single page application libs

	Vue	Angular	React
Difficulty	Easy	Hard	Easy
Market	Not Bad	Good	Good
Integration	No	Yes	No
Performance	All of them almost the same		

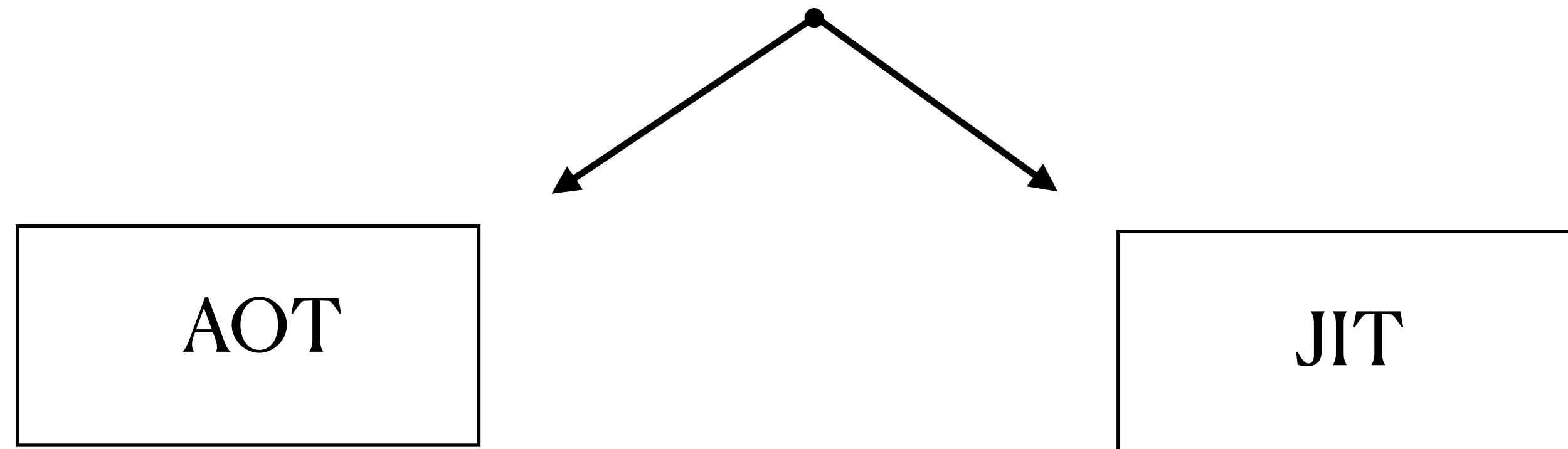# Pre-Requirements

Requirements and skills for Angular

- HTML / HTML 5

- CSS / CSS3 / SASS / SCSS

- JS/DOM

- Typescript

- OOP (Basic knowledge)

- GIT

- Restful API

- Package managers (NPM , Yarn , PNPM)

Angular.js VS Angular

2010 - Till now

- Angular.js : 2010 - 2021

- Angular : 2016 - till now

- Difference : Angular started to rewrite Angular.js Framework from the beginning

- **To makes it :**

- More scalable

- Better performance

- Statically typed (TS)

- Better Architecture

- Mobile and Desktop support

Angular Compilation

```
                    ●
                   ╱ ╲
                  ↙   ↘
```

| AOT |

| JIT |

AOT: Ahead **O**f **T**ime Compilation happens
During the building process

JIT: Just **I**n **T**ime Compilation happens
in the browser run time

Angular 15.3

Official webSite : https://angular.io/

Content

- Hello Angular App
- Component Architecture + Standalone components
- File structure
- Angular CLI
- App module + Bootstrapping
- Routing
- Data Binding (Data)
- Directives (Built-in, "Structural + attribute")
- Component Relations
- Content projection
- Lifecycle hooks
- @HostBinding , @HostListner , @ViewChild
- Observables and reactive programming
- Services
- Dependancy Injection

- Modularity + lazy loading
- Guards
- Forms (Template ,Reactive)
- Dynamic forms
- Pipes
- RXJS (Basics)
- Change detection Strategy (Advanced)
- NGRX (Advanced)
- Smart & Dump Architecture (Advanced+)
- Onion Architecture (Advanced+)
- SSR (Server Side Rendering) (Advanced++)
- Hydration in Angular (Advanced++)
- Ng templates
- Standalone Application (Module Free)
- HTTP clients
- Interceptors
- Latest Updates and Changes from **15.3** to **17.0 (next)**