Introduction To Angular

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Contents

- Angular Introduction
- Single Page Application
- Environment Setup
- Angular CLI

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What is angular

Angular is a popular JavaScript framework developed by google.

Angular empowers developers to build applications that live on the web mobile or the desktop.

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Angular History

Angular was first developed by Google in 2009 as a JavaScript library called AngularJS

The goal was to build client-side applications in a more organized and structured way.

2016, Google released a major update to AngularJS called Angular 2.

The latest version is Angular17.0

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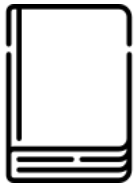
Angular Become Popular?

Component based architecture

Dependency Injection

Routing



Data Binding

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SPA

- SPA refers to Single page application
- Dynamically updates a single HTML page rather than reloading entire pages or navigating to different pages.
- Faster UI more interactive.
- The most notable difference between a regular website and an SPA is the reduced amount of page refreshes.

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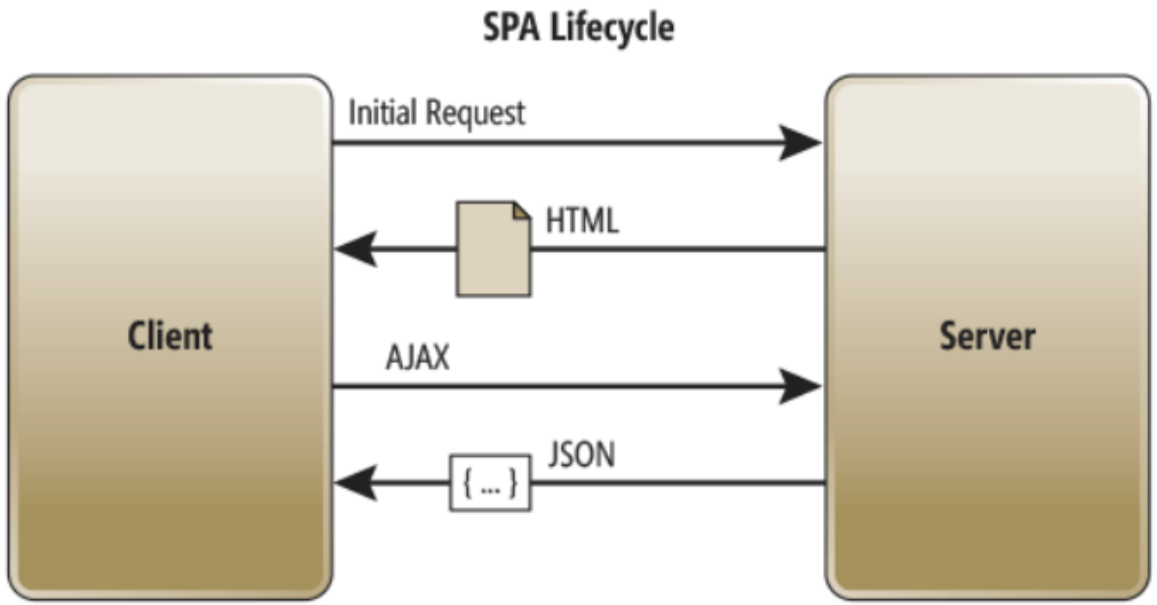
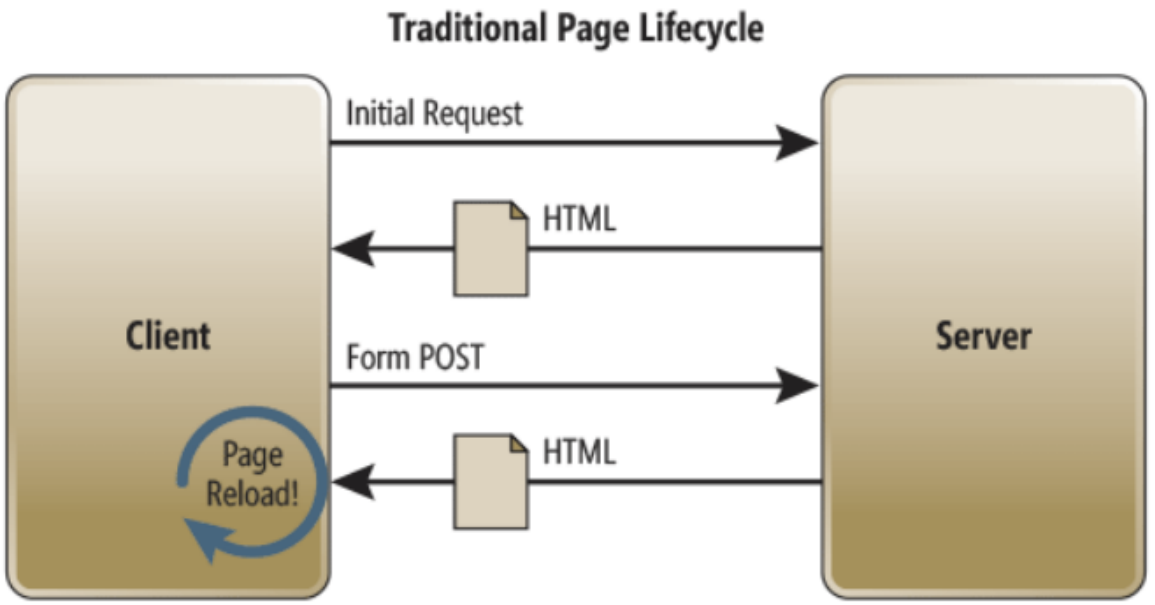
SPA VS Traditional





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Angular CLI

Angular CLI (Command Line Interface) is a command-line tool that makes it easy to create, develop, and maintain Angular applications.

It provides a set of useful commands and tools to create test and deploy angular applications quickly.

Angular CLI is built on top of Node.js and uses the npm package manager to manage dependencies.

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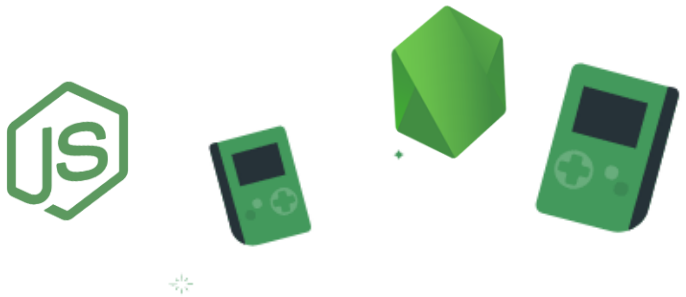
Environment Setup



Install Node.js:

Angular requires Node.js version 10.13 or later. You can download and install it from the official Node.js website.

Install Angular CLI:

After installing Node.js, open the command prompt or terminal and run the following command to install the Angular CLI globally:

```
npm install -g @angular/cli
```

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Node

Node.js is an open source server environment

Node.js is free

Node.js is Node.js runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)

Node.js uses JavaScript on the server

NPM

- Node package manager is a command line utility that interacts with the repository of the open source projects.
- All **npm** packages are defined in files called **package.json**.
- The content of package.json must be written in **JSON**.
- We need npm to install all the libraries for angular and to execute script to our code and launch our angular application.

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Creating a New Angular application

create a new Angular project by running the following command in the command prompt or terminal:

```
ng new project-name
```

Replace **project-name** with the name of your project

Serve the application:

```
cd project-name
ng serve
```

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Choosing Editor

The Editor which we will be using for developing angular projects is Visual Studio Code

Open Source and Free to use

Great Support for TypeScript

Run on Windows, Linux etc.

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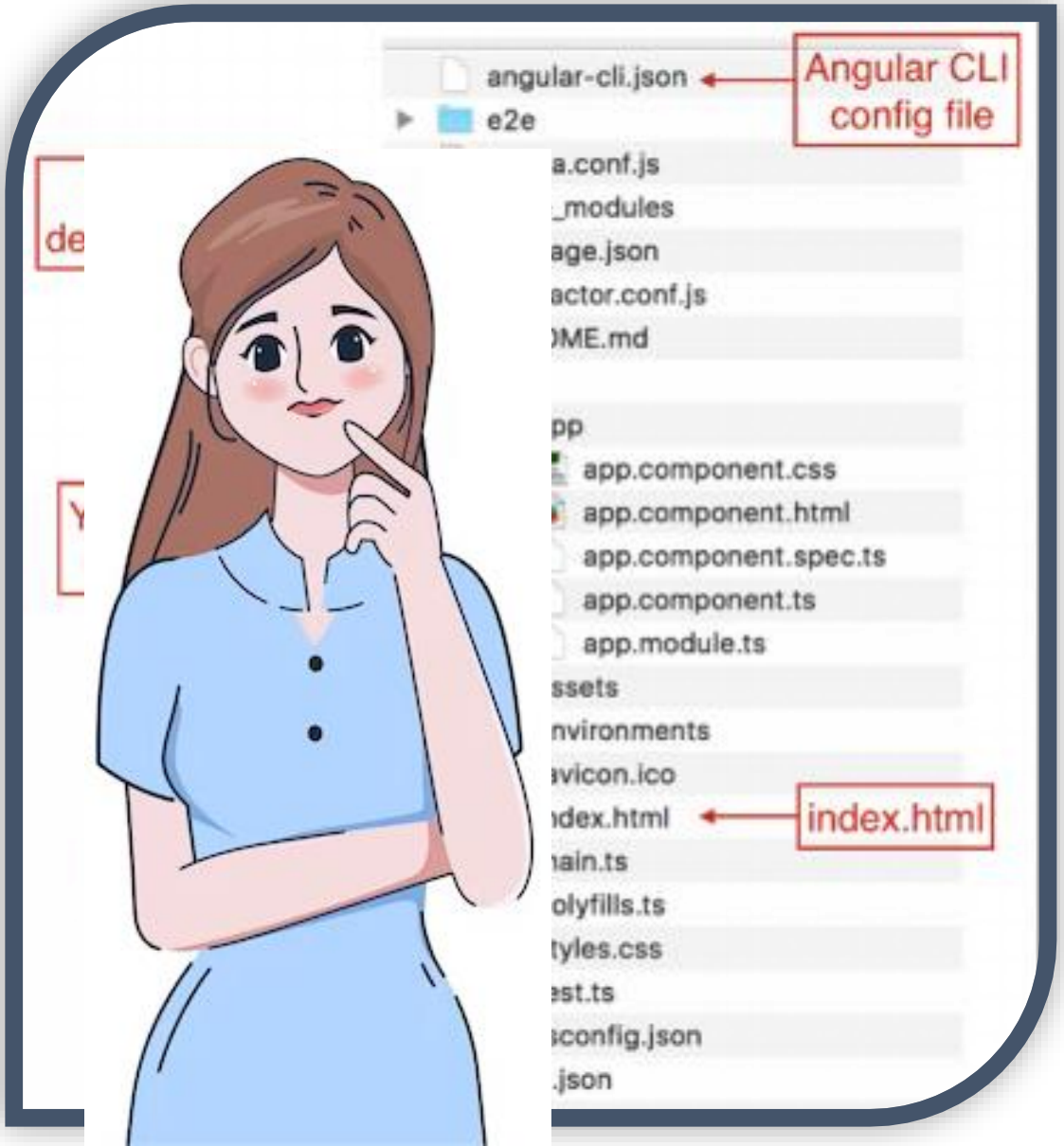
Project Structure



src folder: This is the folder which contains the main code files related to your angular application.

app folder: The app folder contains the files, you have created for app components.

app.component.css: This file contains the cascading style sheets code for your app component.

app.component.html: This file contains the html file related to app component. This is the template file which is used by angular to do the data binding.

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app.component.spec.ts: This file is a unit testing file related to app component. This file is used along with other unit tests. It is run from Angular CLI by the command ng test.

app.component.ts: This is the most important typescript file which includes the view logic behind the component.

app.module.ts: This is also a typescript file which includes all the dependencies for the website. This file is used to define the needed modules to be imported, the components to be declared and the main component to be bootstrapped.

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