

What Is Angular? 😊

Angular is a **TypeScript-based front-end framework** developed and maintained by Google. It is used for building **Single Page Applications (SPA)** with powerful data binding, component architecture, and modern tooling.


Angular 19 Installation – Step-by-Step 😓

🟢 Step 1: Install Node.js and npm (Node Package Manager)

Why?

Angular runs in the Node.js environment and uses npm to manage libraries and tools.

How to Install:

1. Go to the official Node.js website:
 <https://nodejs.org>
2. Download the **LTS (Long-Term Support)** version (e.g., 18.x or later)

After installation, verify:

```
node -v  
npm -v
```

You should see version numbers like:

```
node: v22.1.0  
npm: 9.5.1
```

● Step 2: Install Angular CLI Version 19

Why?

Angular CLI (Command Line Interface) helps you create and manage Angular projects with simple commands. Installing version 19 ensures you're using the latest stable Angular version.

Install Globally:

```
npm install -g @angular/cli@19
```

- **-g**: Installs the package globally on your system
- **@19**: Ensures version 19 is installed (replace **@19** with a specific version if needed)

Confirm installation:

```
ng version
```

You'll see output like:

```
Angular CLI: 19.2.0  
Node: 18.x  
Package Manager: npm  
Angular: 19.0.0  
...
```

● Step 3: Create a New Angular 19 Application

Use the Following command in the terminal : 🖱️
ng new my-angular-app

The CLI will ask:

1. **Would you like to add Angular routing?**
 - Choose **Yes** if your app will use multiple pages (routes)
2. **Which stylesheet format would you like to use?**
 - Options: **CSS**, **SCSS**, **SASS**, **LESS**, or **Stylus**
 - Choose **CSS** if you are just getting started

The CLI will:

- Create the project folder
- Install required dependencies (**node_modules**)
- Set up **tsconfig.json**, **angular.json**, etc.
- Generate a working template app

Navigate into the app folder:

`cd my-angular-app`

🔵 Step 4: Serve the Angular Application (Start Dev Server) 😊

Start the development server:

`ng serve`

- This compiles and starts the app
- Default port is **4200**

Open in browser:

`http://localhost:4200`

You'll see a welcome screen that says "Welcome to my-angular-app".

🔍 Step 5: Explore Project Structure

Here's what Angular CLI generates:

```
my-angular-app/
├── src/
│   ├── app/
│   │   ├── app.component.ts    # Component logic
│   │   ├── app.component.html  # Component template
│   │   └── app.module.ts       # Root module
│   ├── assets/                # Images, icons, etc.
│   └── index.html              # Main HTML page
├── angular.json                # Angular CLI config
├── package.json                # Dependencies & scripts
├── tsconfig.json               # TypeScript settings
└── node_modules/               # Installed packages
```



Useful Angular CLI Commands

Command	Purpose
<code>ng generate component xyz</code>	Creates a new component
<code>ng build</code>	Compiles app for production
<code>ng g s xyz</code>	Create a Service
<code>ng test</code>	Runs unit tests
<code>ng serve</code>	Starts development server
