



Angular | Lecture 1

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Agenda

- What is angular ?
- What is the alternates to angular?
- Single Page Application
- Getting started with angular
- Angular building blocks : Components.
- Templates and styles





What is Angular ?

- Angular is a **Javascript framework** that allows you to create single-page applications. It's only one HTML file and a bunch of JavaScript code we got from the server that changes the content of this HTML.
- Angular is using **Typescript**, which is a superset of Javascript and compiles to Javascript.
- Current stable version is **19.0.7**
- Angular was developed by Google team
- Angular docs : <https://angular.dev/>



What is Angular ?

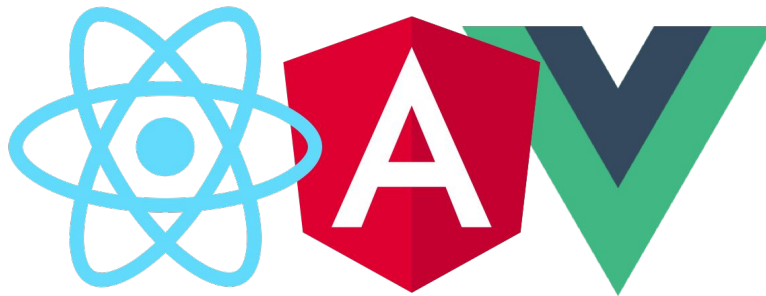
- A component-based framework for building scalable web applications
- A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more
- A suite of developer tools to help you develop, build, test, and update your code



Angular Alternates

Stack Overflow Survey:

<https://survey.stackoverflow.co/2024/technology/#1-web-frameworks-and-technologies>



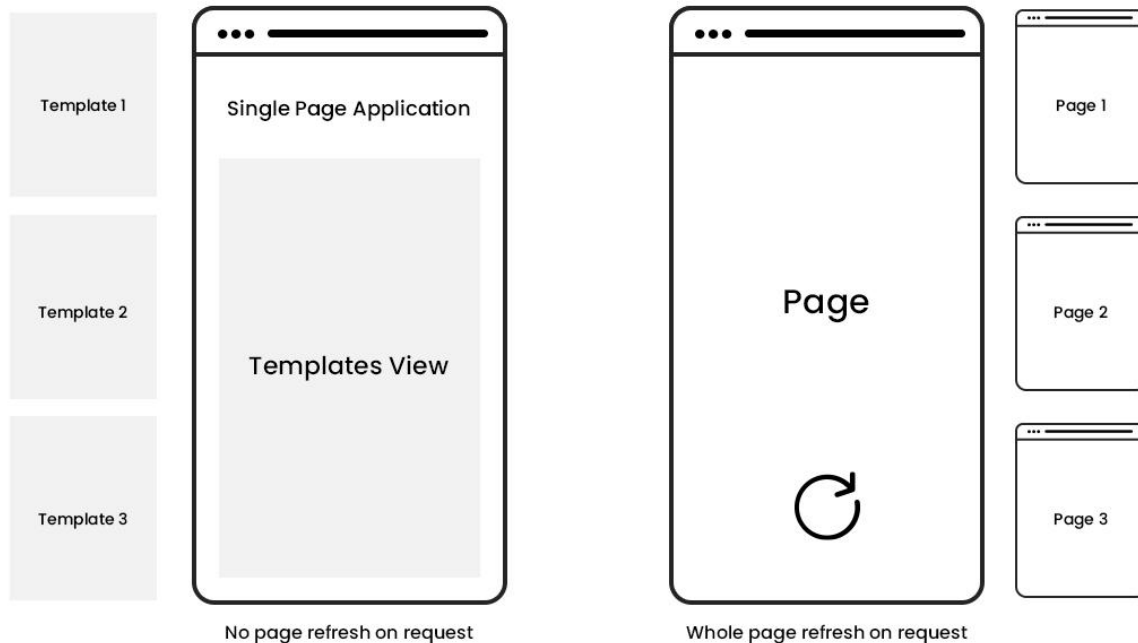


Single page application

- Single Page Applications (SPAs) all the HTML generation happens in the browser. The server only returns one basic HTML page for all incoming requests (no matter the URL).
- But that single HTML page contains a lot of JavaScript code (typically outsourced into separate files) which is responsible for changing the HTML code (technically, the DOM).
- Single page application examples : gmail,facebook,netflix ...etc



Single-page application





Angular : Getting Started

- Install npm (node package manager) :

<https://nodejs.org/en/>

What is NPM ?

Node Package Manager (NPM) is a command line tool that installs, updates or uninstalls Node.js packages in your application. It is also an online repository for open-source Node.js packages. The node community around the world creates useful modules and publishes them as packages in this repository.



Angular : Getting Started

- Install Angular CLI (command line interface) globally :

`npm install -g @angular/cli`

What is CLI ?

The Angular CLI is a command-line interface tool that you use to initialize, develop, scaffold, and maintain Angular applications directly from a command shell.

Then try to run `ng version` to make sure that angular/cli installed.



Angular : Getting Started

To create your first angular app , run the following command in CMD :

- **ng new project-name** (create angular app)
- **cd ./project-name** (enter project folder)
- **ng serve -o** (run application and -o (--open) refers to open application automatically in browser)



Angular : Getting Started

Let's discover and have a deep look at our angular app structure

<https://angular.dev/reference/configs/file-structure>



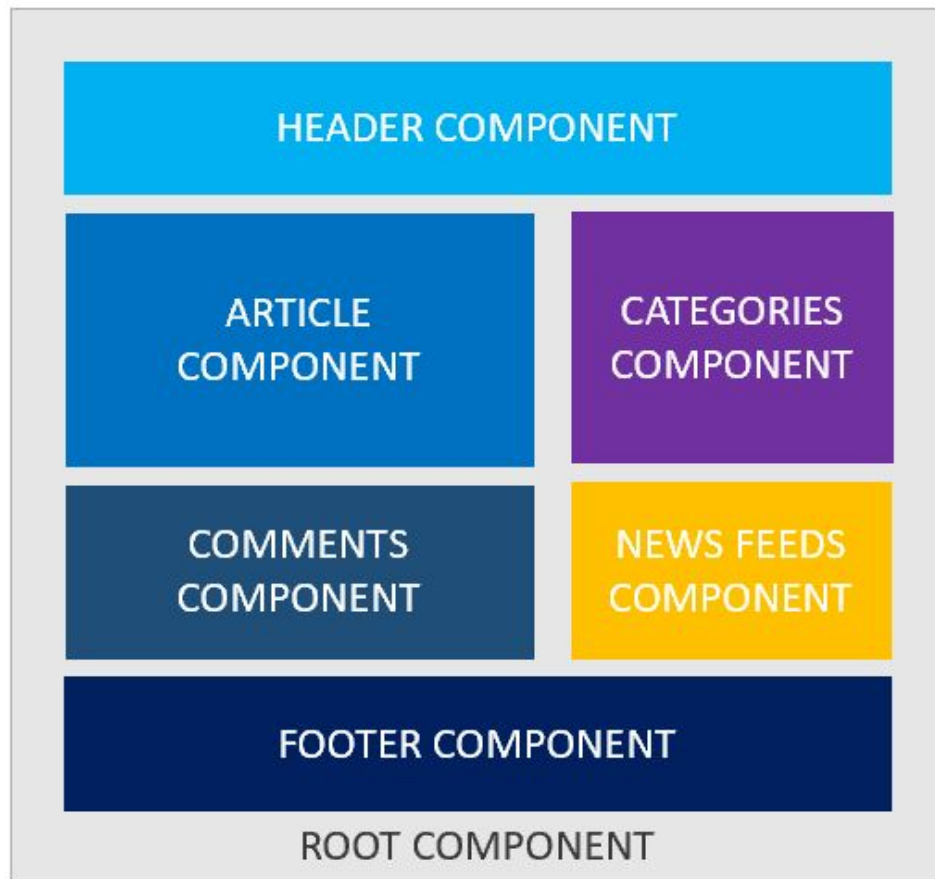


Components





Components





Components

Components are the main building block for Angular applications ,
Components are composable, we can build larger Components from smaller ones. Each component consists of:

- An HTML template that declares what renders on the page
- A Typescript class that defines behavior
- A CSS selector that defines how the component is used in a template
- Spec file for testing



Standalone components

Components, directives, and pipes can now be marked as standalone: true. Angular classes marked as standalone do not need to be declared in an NgModule

Standalone components specify their dependencies directly instead of getting them through NgModules

<https://angular.dev/guide/components/importing>



Components

- Create new component : **ng generate component navbar**
- Discover new generated component class.
- @Component decorator: decorator that marks a class as an Angular component and provides configuration metadata that determines how the component should be processed, instantiated, and used at runtime.
- External template and styles





Reusable components

- To use component in any other place you can use it by selector name mentioned in `@component` between HTML tags.
- Create once , use multiple times.
- Syntax : `<app-navbar></app-navbar>`
- Add component to imports as it's a standalone component



Bootstrap





Bootstrap

Install Bootstrap : `npm install bootstrap`

Then add bootstrap css file to style.css

```
@import "../node_modules/bootstrap/dist/css/bootstrap.min.css"
```

you can also bootstrap angular component from **ngBootstrap** :

<https://ng-bootstrap.github.io/#/getting-started>

Install command : `ng add @ng-bootstrap/ng-bootstrap`



Thank you



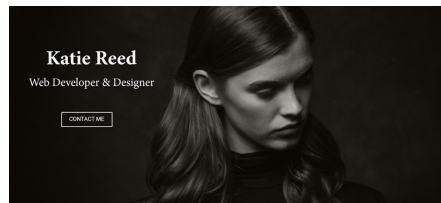
Portfolio

Replace code found in app.component.html and start create your portfolio page using Bootstrap.

Portfolio will contain the following sections :

- Hero section (name and job title).
- Bio and about me (education and experiences) section with button to download CV .
- Skills section with progress bar for each skill
- Portfolio and projects section
- Footer contains contact us section with email and social media links (facebook , github , linkedin) [Will use fontawesome - **Bonus**]

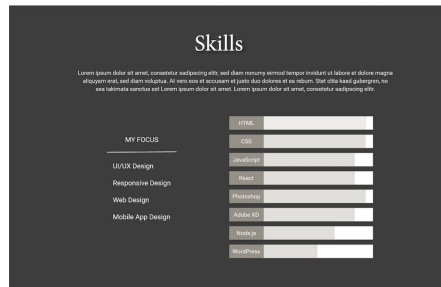
Each section is a separate component.



About me

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Portfolio

