

- 1) Define Angular and explain its primary purpose in web development.
- Angular is a typescript based, open source web application
 - It is developed by google
 - It is build for single page web applications
- purpose in web development:-

- 1) Component Based architecture
- 2) two-way binding
- 3) Dependency injection
- 4) Routing
- 5) Built in tools and CLI
- 6) Form handling

Angular is a robust front-end framework used to build modern, interactive and scalable web applications.

- 2) What is the primary difference between angular's two way data binding & React JS one-way data flow?

Two-way binding:-

- In angular two way binding the component and view are kept in sync.
 - when the user changes in the UI, the model is updated immediately
- EX:- `<input [(ngmodel)] = "username">`

React : one way data flow:-

- In React the data flows only from component state to UI state
- when any change occurs you need to manually event handle events.

EX:- `<input value = {username} on change = { (e) => setUsername(e.target.username)} >`

Differences

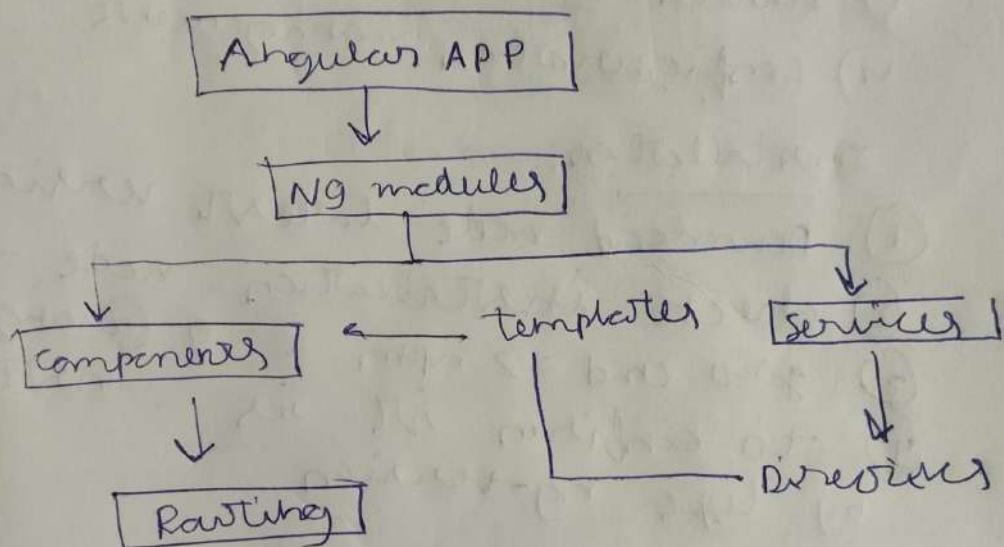
Angular

- Two way direction
- UI updates automatic
- easier for small forms, inputs
- less manual control
- Real DOM

React

- one way
- manual
- more predictable controlled
- more explicit
- virtual DOM

③ Angular architecture diagram



ng module:-

- It is a decorator, It is a container for a group of related components, services.
- It imports the modules that are needed
 - It exports the components to make available
 - It provides services through app module

4) Installing Angular cli

Angular cli:-

It is a powerful command line tool that helps developers to create, build, test, manage angular application.

why it is using:-

- 1) project creation EX:- ng new project name
- 2) generation of components, services
- 3) starts a live server
- 4) configuration management

Installation:-

- ① download node latest version
- ② check installation node -v, npm
- ③ goto cmd => npm i -g @angular/cli
- ④ to confirm it is installed by type ng-version

⑤ creation of angular application:-

→ to create a project
ng new myapp.

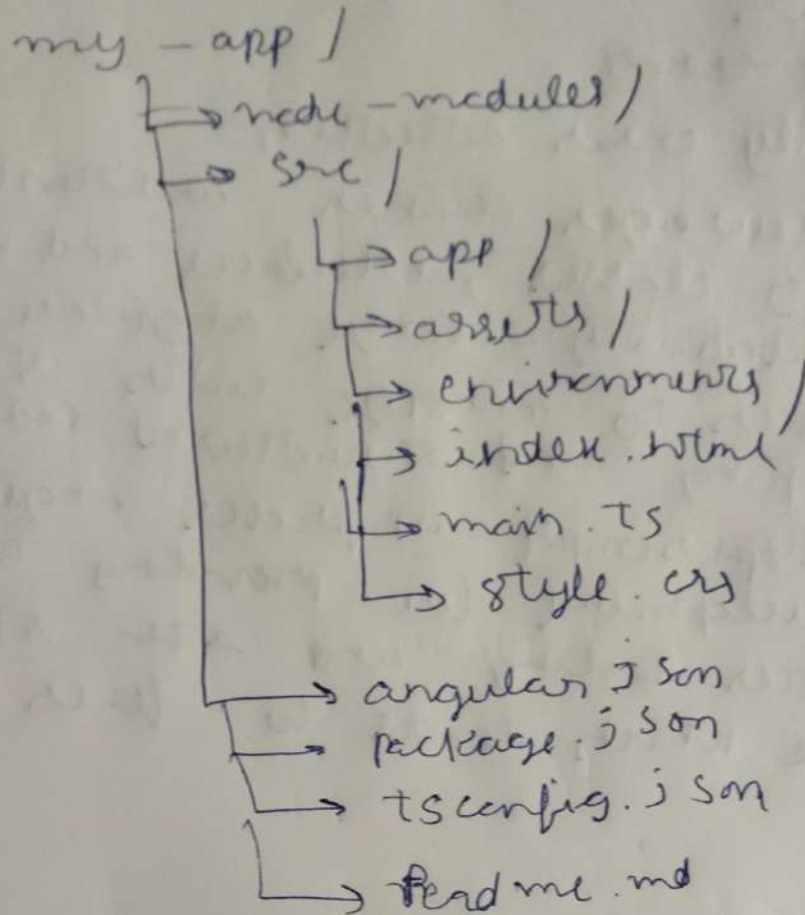
→ Type Y/N depending on whether
you want the features

→ cd my app

→ ng serve / ng s

defaut

Default Directories:-



⑥ Typescript in angular

typescript is used in angular because

- ① Helps to catch errors at compilation time
- ② improved code quality
- ③ It supports ~~JS~~ OOPS concepts
- ④ Typescript compiles to plain Javascript, so it runs on any browser.

Typescript enhances the development process in angular

① ~~Early error~~

① Early error detection

② encourages cleaner architecture using classes, interfaces and modules

③ Scalability: - large angular apps are easier to manage with stricter typing and structured code

④ Typescript improves angular development for providing type safety, better tooling and ~~etc~~ structured code which leads to fewer bugs.