* What is angular?

**Angular** is a popular open-source web application framework developed and maintained by Google. It is primarily used for building dynamic, single-page web applications (SPAs). Angular provides a comprehensive solution for developing web apps by offering tools for building user interfaces, handling user input, managing data, and routing.

* Difference between Angular & React?

**Angular** and **React** are two of the most popular front-end frameworks/libraries for building web applications, but they differ in their architecture, design philosophy, and the type of projects they are best suited for.

Core Differences:

**Type:**

**Angular:** A full-fledged framework.

**React:** A JavaScript library focused on UI components.

**Data Binding:**

**Angular:** Two-way data binding (changes in the UI automatically update the model, and vice versa).

**React:** One-way data binding (changes in the model update the UI, but not the other way around).

**Components:**

**Angular:** Components are tightly coupled with the framework and use TypeScript.

**React:** Components are more flexible and typically use JavaScript (or optionally TypeScript) with JSX.

**Rendering:**

**Angular:** Uses the real DOM for rendering.

**React:** Employs a virtual DOM for faster updates and better performance.

**Learning Curve:**

**Angular:** Steeper learning curve due to its comprehensive nature and TypeScript.

**React:** Easier to learn initially, but requires understanding of component-based architecture and state management.

* What is difference between Typescript & Javascript?

**TypeScript** and **JavaScript** are related but distinct programming languages. TypeScript is built on top of JavaScript, adding extra features while still allowing you to write plain JavaScript if needed. Here’s a detailed comparison:

1. Typing:

**TypeScript:**

Statically typed (optional). You can define the types of variables, function parameters, and return values, allowing for better code analysis and error detection during development.

**JavaScript:**

Dynamically typed. The type of a variable is determined at runtime, which can lead to errors that are only caught during execution.

2. Superset/Subset:

**TypeScript:**

A superset of JavaScript, meaning it includes all JavaScript features and adds additional functionalities like interfaces, generics, and decorators.

**JavaScript:**

The base language, providing the core syntax and functionality for web development.

3. Compilation:

**TypeScript:** Requires compilation into JavaScript before it can be executed in a web browser.

**JavaScript:** Can be executed directly by browsers without any compilation step.

4. Tooling:

**TypeScript:**

Offers enhanced tooling support, including better code completion, refactoring, and debugging capabilities in many IDEs.

**JavaScript:**

Tooling support varies, but generally less robust than TypeScript for complex projects.

5. Error Detection:

**TypeScript:** Catches type-related errors during development, preventing runtime errors and improving code reliability.

**JavaScript:** Errors may only be detected at runtime, making debugging more challenging.

6. Community and Adoption:

* **TypeScript:** Growing rapidly in popularity, especially for large-scale applications, due to its type safety and enhanced tooling.
* **JavaScript:** Widely adopted and used across the web development landscape.
* What is difference between Angular & AngularJs?

**Angular** and **AngularJS** are two frameworks for building web applications, both developed by Google, but they have significant differences in their architecture, performance, and features. Here’s a breakdown of the main differences between **Angular** (also known as Angular 2+ or simply Angular) and **AngularJS** (also known as Angular 1.x):

But they differ in several ways, including:

**Language**

Angular is based on TypeScript, while AngularJS is based on JavaScript.

**Architecture**

Angular uses a component-based architecture, while AngularJS uses the MVC framework.

**Data binding**

Angular supports one-way and two-way data binding, while AngularJS only supports one-way data binding.

**Command-line interface**

Angular has a command-line interface (CLI) for testing and application maintenance, while AngularJS does not.

**Mobile support**

Angular offers mobile support with Ionic and NativeScript, while AngularJS does not.

**Performance**

Angular is at least seven times faster than AngularJS.

**Dependency injection**

Angular has a hierarchical dependency injection system, while AngularJS has only one injector.

**Routing**

Angular has advanced routing features that support lazy loading, while AngularJS uses '@routeProvider.when' to define routing information.

**Project structure**

Angular projects are structured and easier to manage, while AngularJS projects are not.