**Angular**

• What is a service in Angular and how do you create one?

**Answer:**  Service is a class that holds a specific functionality or set of data, and can be reused throughout the application. Services are used to share data between the components. To create a Service, you need to create a new TS file , and add it in the providers array in the module or component.

• Explain the difference between a component and a directive in Angular.

**Answer:** Components is a reusable block of an Angular application , it contains template, class and css. Components defines the view , logic and behavior of the application. Directives used to extend the functionality of the HTML elements by adding behavior to them.

• How do you handle forms in Angular?

**Answer:** Forms can be handled using FormsModule, which provides directives and classes for creating and validating forms.

• How do you handle routing in an Angular app?

**Answer:** Routing is used to navigate between pages in the application. In Angular we use RouterModule and Routs to handle routing. We define the path and the component related to it in the routes object. We add the routerLink directive to the links in our template to define the navigation path. In the component class we use the ‘navigate’ function to navigate programmatically.

• How do you handle asynchronous data in an Angular app?

**Answer:** Asynchronous data can be handled by the ‘subscribe’ method that allows us to subscribe to an observable and perform an action when the data is emitted. Also, we can use async/await in our component class.

• What is dependency injection in Angular and how does it work?

**Answer:** Dependency injection is used to provide dependencies to services or components throughout the application. By using dependency injection, the component doesn’t need to know how the service is implemented or how it obtains its data. This makes the code more reusable and maintainable.

• How do you implement internationalization in an Angular app?

• How do you optimize the performance of an Angular app?

**Answer:** We can use Lazy Loading - it can delay the loading of certain parts of the application until they are needed.

We can also use ‘check only on push’ strategy - Angular uses check everything strategy to check for changes in the data and update the DOM, but we can improve the performance by reducing number of checks .

• How do you implement automated testing in an Angular app?

**Answer:** We can do End-To-End testing by test the complete flow of the application. Also, we can write unit-tests by using tools like cypress.

• How do you handle the security of an Angular app?

**Answer:** We can use only HTTPS to ensure that all the data sent between the web server and the browser is encrypted.

We can also use a proper authentication and authorization mechanisms to protect sensitive data and prevent authorized access.

Create a simple Angular app that displays a list of items. The app should have the following features:

The list of items should be retrieved from a JSON file using an HTTP service.

The list of items should be displayed using a table with the following columns: ID, Name, Description, and Price.

The user should be able to sort the list of items by ID, Name, or Price.

The user should be able to filter the list of items by Name or Description.

The app should have pagination, with a default page size of 10 items per page.

The user should be able to change the page size and navigate to different pages of the list.

The user should be able to add a new item to the list by filling out a form and submitting it. The form should include fields for the Name, Description, and Price of the item.

The user should be able to edit an existing item in the list by clicking on an "Edit" button next to the item and filling out a form to update the item's details.

Please provide the code for the app and include instructions on how to run it. The task should not take more than one hour to complete.