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AngularJS Interview Questions with answer

Topics : AngularJS
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1. What is AngularJS?

AngularJS is a JavaScript-based open-source front-end web application framework developed and maintained by Google. It is designed to make both the development and testing of such applications easier by providing a framework for client-side model-view-controller (MVC) architecture.

2. Explain the key features of AngularJS.

- Two-way data binding
- Dependency injection
- Directives
- Templates
- MVC architecture
- Testing support

3. What is two-way data binding in AngularJS?

Two-way data binding is a synchronization mechanism between the model and the view. If the model changes, the view reflects the change, and vice versa. It is achieved using the ng-model directive.

4. Explain Dependency Injection in AngularJS.

Dependency Injection (DI) is a software design pattern in which components are given their dependencies instead of hardcoding them within the component. AngularJS uses DI to make components more modular and testable.

5. What is a directive in AngularJS?

Directives in AngularJS are markers on a DOM element that tell AngularJS's HTML compiler to attach a specified behavior to that DOM element or even transform the DOM element and its children.

6. What is ng-repeat in AngularJS?

ng-repeat is a directive that repeats a set of HTML, a given number of times or for each item in a collection.

7. Explain AngularJS expressions.

AngularJS expressions are used to bind data to HTML. They are written inside double curly braces

({{ expression }}) and are used to display dynamic values on the web page.

8. What is a module in AngularJS?

In AngularJS, a module is a container for different parts of an application, including controllers, services, filters, directives, etc.

9. What is the purpose of ng-app directive in AngularJS?

The ng-app directive initializes an AngularJS application and automatically bootstraps it.

10. Explain the role of ng-controller.

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The `ng-controller` directive attaches a controller class to the view. It defines the application controller that contains the logic and functions used in the view.

11. What is AngularJS filter?

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AngularJS filters format the value of an expression for display to the user. They can be used in the view templates, controllers, or services to format data.

12. What is the difference between factory and service in AngularJS?

Both `factory` and `service` are used for creating services in AngularJS. - **Factory:** It is a pattern for creating services where a factory function is responsible for creating the service object. - **Service:** It is a constructor function, and the new keyword is used to create an instance of the service.

13. What is the purpose of $rootScope in AngularJS?

`$rootScope` is the top-level scope and is available throughout the AngularJS application. It is used to store global data that needs to be shared among all controllers.

14. Explain AngularJS digest cycle.

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The digest cycle is the process in which AngularJS updates the view with new data. It iterates through all the watches in the scope, checks for changes, and updates the view accordingly.

15. What is the role of $http service in AngularJS?

The `$http` service is used to make HTTP requests to interact with remote servers and fetch or send data.

16. Explain ng-hide and ng-show directives.

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- `ng-hide`: Hides the HTML element if the expression evaluates to true. - `ng-show`: Shows the HTML element if the expression evaluates to true.

17. What is the purpose of ng-init directive?

`ng-init` is used to initialize values of variables in AngularJS. It is commonly used in conjunction with `ng-repeat` to initialize loop variables.

18. How does AngularJS handle dependency injection?

AngularJS uses dependency injection to provide components with their dependencies. It uses the `$injector` service to instantiate and inject dependencies into controllers, services, filters, etc.

19. What is the purpose of ng-view in AngularJS?

`ng-view` is a directive in AngularJS that provides a container where a route's template will be inserted. It is used in conjunction with the AngularJS router.

20. What is a directive link function?

The link function is a function that runs after the template has been cloned and is ready to be transformed by AngularJS. It is used to manipulate the DOM, attach event listeners, and set up watches.

21. Explain the AngularJS $compile service.

The `$compile` service is used to compile an HTML string or DOM into a template or a link function.

22. What is ng-options in AngularJS?

`ng-options` is a directive in AngularJS used to dynamically generate a list of `<option>` elements for the `<select>` element. It is often used with the `ng-model` directive.

23. Explain AngularJS controllerAs syntax.

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`controllerAs` is a syntax in AngularJS that allows you to use a controller alias in the view, making it easier to reference properties and methods from the controller.

24. What is AngularJS $routeParams?

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`$routeParams` is a service in AngularJS that allows you to retrieve the current set of route parameters.

25. Explain $location service in AngularJS.

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The `$location` service provides methods for reading and changing the browser's URL. It is commonly used for navigation in AngularJS applications.

26. What is the purpose of ng-disabled directive?

The `ng-disabled` directive is used to disable or enable HTML elements based on an expression. If the expression evaluates to true, the element is disabled.

27. What is ng-cloak in AngularJS?

The `ng-cloak` directive is used to prevent the AngularJS template from being displayed until AngularJS has finished compilation.

28. Explain $watch and $digest in AngularJS.

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- `$watch`: It is a function used to monitor changes to a variable and execute a callback function when the variable changes. - `$digest`: It is a function that iterates through all watches in the scope and updates the view with new data.

29. How does AngularJS handle routing?

AngularJS uses the `ngRoute` module to implement routing. The `$routeProvider` service is used to configure routes, and the `ng-view` directive is used to define where the route's template should be displayed.

30. What is the purpose of ng-include in AngularJS?

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`ng-include` is a directive in AngularJS used to include external HTML templates into the main HTML file.

31. Explain the concept of AngularJS transclusion.

Transclusion in AngularJS allows you to include the content of one directive inside another. It is often used with custom directives to create reusable components.

32. What is the role of $q service in AngularJS?

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The `$q` service is used for creating and managing promises in AngularJS. Promises are used to handle asynchronous operations.

33. Explain AngularJS filters and give examples.

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Filters in AngularJS are used to format data before it is displayed. Examples include `currency`, `date`, `uppercase`, and custom filters.

34. What is ng-animate in AngularJS?

`ng-animate` is a module in AngularJS that provides support for CSS-based animations. It can be

used to animate the entering and leaving of elements in the DOM.

35. What is the purpose of $timeout service in AngularJS?

The `$timeout` service is a wrapper for the `window.setTimeout` function and is used to introduce a delay in the execution of a function.

36. Explain the concept of AngularJS directives priority.

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Directive priority is a number that defines the order in which directives are executed when they share the same DOM element. Directives with higher priority values are executed first.

37. What is the AngularJS ng-repeat-start and ng-repeat-end directives?

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`ng-repeat-start` and `ng-repeat-end` are directives that allow you to repeat a block of HTML elements using the `ng-repeat` directive. They define the start and end of the block to be repeated.

38. How do you handle route parameters in AngularJS?

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Route parameters in AngularJS are accessed using the `$routeParams` service. It allows you to retrieve values from the URL.

39. Explain AngularJS expression context.

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Expression context refers to the scope in which an AngularJS expression is evaluated. It can be the scope of a controller, directive, or other parts of an AngularJS application.

40. What is the purpose of AngularJS ngTouch module?

The `ngTouch` module in AngularJS provides touch-enabled directives to support mobile and tablet applications. It includes directives like `ng-swipe`, `ng-swipe-left`, `ng-swipe-right`, etc.

41. What is AngularJS template cache and how is it useful?

The template cache is a part of AngularJS's $templateCache service that allows you to cache HTML templates. It is useful for improving performance by reducing the number of HTTP requests needed to load templates.

42. Explain AngularJS form validation.

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AngularJS provides a built-in form validation mechanism using directives like `ng-required`, `ng-minlength`, `ng-maxlength`, `ng-pattern`, etc. Custom validators can also be implemented.

43. What is AngularJS directive isolate scope?

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An isolate scope is a separate scope created for a directive in AngularJS. It is not prototypically inherited from its parent scope, providing better encapsulation and preventing unintended scope modifications.

44. Explain the AngularJS ngMock module.

The `ngMock` module in AngularJS is used for unit testing. It provides mocks and utilities to facilitate testing of AngularJS components.

45. What is AngularJS ngMessage and ngMessages?

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`ngMessage` and `ngMessages` are directives in AngularJS used for displaying error messages based on form validation. They are part of the AngularJS ngMessages module.

46. What is the purpose of AngularJS ngModelOptions?

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`ngModelOptions` is a directive in AngularJS that provides options for how model updates and validation should be performed. It allows fine-tuning of the behavior of the ngModel directive.

47. What is the AngularJS $anchorScroll service?

The `$anchorScroll` service in AngularJS is used for scrolling to a specified anchor element within a page. It is often used in conjunction with the `ng-click` directive.

48. Explain AngularJS ngPluralize directive.

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The `ngPluralize` directive in AngularJS is used for displaying messages based on the count of items. It supports pluralization and provides different messages for singular and plural cases.

49. What is the purpose of AngularJS ngRepeat track by?

`track by` is an optional expression used with the `ng-repeat` directive to improve performance. It enables AngularJS to track the identity of items in a collection, reducing unnecessary DOM manipulations.

50. How do you handle exceptions in AngularJS?

Exceptions in AngularJS can be handled using the `$exceptionHandler` service. It allows you to define a custom function to handle uncaught exceptions and errors in your AngularJS application.