1. **What is AngularJS?** AngularJS is an open-source JavaScript framework developed by Google. It's used for building dynamic web applications by extending HTML's capabilities and providing a structured framework for front-end development. Its primary features include two-way data binding, directives, dependency injection, and MVC architecture. Advantages include faster development, easier testing, and a modular structure.
2. **Explain two-way data binding in AngularJS.** Two-way data binding is a synchronization process between the model (data) and the view (UI). Changes in the model are instantly reflected in the view and vice versa. This means that when data in the model changes, the view is automatically updated, and when UI elements change, the underlying data is updated as well.
3. **What are directives in AngularJS?** Directives are markers on a DOM element that tell AngularJS's HTML compiler ($compile) to attach a specified behavior to that DOM element or even transform the DOM element and its children. Examples include ng-model, ng-repeat, ng-show, which respectively handle data binding, repeating elements, and conditional rendering.
4. **Describe the components of AngularJS MVC architecture (Model-View-Controller).** AngularJS implements the MVC (Model-View-Controller) architecture where:
    - **Model:** Represents the data and business logic.
    - **View:** Represents the user interface (UI) that users interact with.
    - **Controller:** Acts as an intermediary between the Model and the View, managing the data flow, handling user inputs, and updating the Model and View accordingly.
5. **What is dependency injection in AngularJS?** Dependency injection is a design pattern used in AngularJS to inject objects or functions (dependencies) into components (like controllers, services, directives) rather than letting the components create or find these dependencies themselves. This promotes modularity, testability, and maintainability by making components more independent and reusable.
6. **Explain the concept of scope in AngularJS.** Scope in AngularJS is an object that refers to the application model and acts as a context for evaluating expressions. Scopes are arranged in a hierarchical structure, resembling the DOM structure of the application. They provide data binding between the HTML (View) and JavaScript (Controller) and manage the model state.
7. **Differentiate between services and factories in AngularJS.** Both services and factories in AngularJS are ways to create reusable components, but:
    - **Services:** Typically return an object or a function and are instantiated with the new keyword.
    - **Factories:** Return a value or a function and are more flexible in what they return, allowing for custom construction logic. Factories are usually created using functions that return an object.
8. **What are filters in AngularJS?** Filters in AngularJS are used to format data before displaying it to the user. They can be used in expressions, directives, and binding expressions to modify the way data is presented. Examples include currency, date, uppercase, etc.

9. **Describe routing in AngularJS.** Routing in AngularJS is used to navigate between different views or pages of a single-page application without a full page reload. It's achieved using the ngRoute module or ui-router and involves defining routes (URL patterns) and associating them with specific templates and controllers.
10. **Explain the digest cycle in AngularJS.** The digest cycle is an essential part of AngularJS's data binding mechanism. During the digest cycle, AngularJS checks for changes in the application's data by comparing the previous and current values of the variables watched by AngularJS. If changes are detected, AngularJS updates the DOM to reflect these changes. The digest cycle is triggered by various actions like user events, AJAX requests, or timers.
11. **What are controllers in AngularJS?** Controllers in AngularJS are JavaScript functions that are responsible for handling user interactions, manipulating the model, and updating the view. They act as a bridge between the model and the view, containing the business logic and data relevant to a specific part of the application.
12. **How does AngularJS handle form validations?** AngularJS provides built-in form validation features using directives like ng-required, ng-minlength, ng-maxlength, etc. It also offers custom validation by allowing developers to create their own validation directives. Validation states are managed by AngularJS based on the data entered by the user and the defined validation rules.