AngularJS Introduction

Topics : AngularJS
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AngularJS is a JavaScript-based open-source front-end web application framework that was developed by Google. It's designed to make both the development and testing of such applications easier by providing a framework for client-side model–view–controller (MVC) and model–view–viewmodel (MVVM) architectures, along with components commonly used in rich internet applications.

1. **Two-Way Data Binding:** AngularJS implements two-way data binding, which means that changes in the user interface (UI) immediately influence the application objects, and vice versa. This helps in keeping the model and view in sync without having to write explicit boilerplate code.

2. **MVC Architecture:** AngularJS follows the Model-View-Controller (MVC) architectural pattern, which helps in organizing the code into modular components. The model represents the data and business logic, the view handles the presentation and user interface, and the controller manages the communication between the model and view.

3. **Directives:** Directives in AngularJS are markers on a DOM element that tell AngularJS to attach a specified behavior to that DOM element or even transform the DOM element and its children. Some common directives include `ng-model`, `ng-repeat`, and `ng-show`.

4. **Dependency Injection:** AngularJS uses dependency injection to make components more modular and easier to test. Dependencies are passed to components rather than being hardcoded, allowing for better flexibility and maintainability.

5. **Services:** Services in AngularJS are reusable components that provide functionality across an application. They are often used for tasks such as data retrieval, sharing data between controllers, or encapsulating business logic.

6. **Templates:** AngularJS uses HTML as the template language. Templates are combined with information from the model and controller to render dynamic views. This separation of concerns makes it easier to manage and understand the code.

7. **Filters:** Filters in AngularJS allow the transformation of data before it is displayed to the user. They can be used to format currency, filter arrays, order lists, and more.

8. **Modules:** AngularJS applications are typically organized into modules. A module in AngularJS is a container for the different parts of an application, including controllers, services, filters, directives, and more.

9. **Testing:** AngularJS provides support for unit testing out of the box. This is facilitated by the dependency injection system, making it easier to mock and test individual components.