**1.What are the key features of AngularJS?**

* Scope
* Controller
* Model
* View
* Services
* Data Binding
* Directives
* Filters
* Testable

**2. What is Angular Expression? Explain the key difference between angular expressions and JavaScript expressions**

Like JavaScript, Angular expressions are code snippets that are usually placed in binding such as {{ expression }}

The key difference between the JavaScript expressions and Angular expressions is:

* **Context:** In Angular, the expressions are evaluated against a scope object, while the JavaScript expressions are evaluated against the global window
* **Forgiving:** In Angular expression, evaluation is forgiving to null and undefined, while in JavaScript undefined properties generate TypeError or ReferenceError
* **No Control Flow Statements:** Loops, conditionals or exceptions cannot be used in an angular expression
* **Filters:** You can use filters to format data before displaying it.

### 3. What are directives? Name some of the most commonly used directives in AngularJS application

A directive is something that introduces new syntax. They are like markers on the DOM element, which attaches a special behavior to it. In any AngularJS application, directives are the most important components.

Some of the commonly used directives are:

1) ng-model

2) ng-App

3) ng-bind

4) ng-repeat

5) ng-show

### 4.How Angular JS routes work?

AngularJS routes enable you to create different URLs for different content in your application. Different URLs for different content enable the user to bookmark URLs to specific content. Each such bookmarkable URL in AngularJS is called a route

A value in Angular JS is a simple object. It can be a number, string, or JavaScript object. Values are typically used as configuration injected into factories, services, or controllers. A value should belong to an AngularJS module.

Injecting a value into an AngularJS controller function is done by adding a parameter with the same name as the value

**5. What are the benefits of AngularJS?**

Benefits of AngularJS are:

* **Registering Callbacks:** There is no need to register callbacks. This makes your code simple and easy to debug.
* **Control HTML DOM programmatically:**Applications which are created using Angular are not required to manipulate the DOM.
* **Transfer data to and from the UI:**AngularJS helps to eliminate almost all of the boilerplate. It can validate the form, display errors, return to an internal model, and so on.
* **No initialization code:**With AngularJS, you can bootstrap your app easily. You can use auto injected services into your application in Guice.

### 6. Styling form by ngModel adds to CSS classes

1. ng- valid
2. ng- invalid
3. ng-pristine
4. ng-dirty

### 7. Give an example of ng-view in Angular.

### 8. Explain the differences between Angular and jQuery

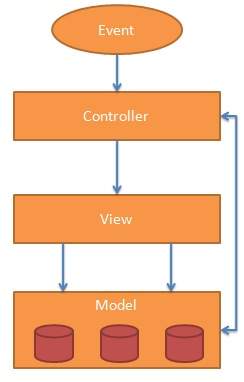
|  |  |
| --- | --- |
| **AngularJS** | **JQuery** |
| AngularJs is difficult to understand | Jquery is very easy to understand. |
| It supports two-way binding process | It does not support data binding process |
| It provides support for deep linking routing | It does not provide support for deep linking routing |

### 9. MVC architecture in Angular JS

**M**odel **V**iew **C**ontroller or MVC as it is popularly called, is a software design pattern for developing web applications. A Model View Controller pattern is made up of the following three parts −

* **Model** − It is the lowest level of the pattern responsible for maintaining data.
* **View** − It is responsible for displaying all or a portion of the data to the user.
* **Controller** − It is a software Code that controls the interactions between the Model and View.

MVC is popular because it isolates the application logic from the user interface layer and supports separation of concerns. The controller receives all requests for the application and then works with the model to prepare any data needed by the view. The view then uses the data prepared by the controller to generate a final presentable response. The MVC abstraction can be graphically represented as follows.



## The Model

The model is responsible for managing application data. It responds to the request from view and to the instructions from controller to update itself.

## The View

A presentation of data in a particular format, triggered by the controller's decision to present the data. They are script-based template systems such as JSP, ASP, PHP and very easy to integrate with AJAX technology.

## The Controller

The controller responds to user input and performs interactions on the data model objects. The controller receives input, validates it, and then performs business operations that modify the state of the data model.

AngularJS is a MVC based framework. In the coming chapters, we will see how AngularJS uses MVC methodology.

### 10. Angular JS Table:

<table>

<tr>

<th>Name</th>

<th>Marks</th>

</tr>

<tr ng-repeat = "x.subjects">

<td>{{ subject.name }}</td>

<td>{{ subject.marks }}</td>

</tr>

</table>

1. **What are the advantages of AngularJS?**

Following are the advantages of AngularJS.

* AngularJS provides capability to create Single Page Application in a very clean and maintainable way.
* AngularJS provides data binding capability to HTML thus giving user a rich and responsive experience.
* AngularJS code is unit testable.
* AngularJS uses dependency injection and make use of separation of concerns.
* AngularJS provides reusable components.
* With AngularJS, developer writes less code and gets more functionality.
* In AngularJS, views are pure html pages, and controllers written in JavaScript do the business processing.
* AngularJS applications can run on all major browsers and smart phones including Android and iOS based phones/tablets.

**12.What are the disadvantages of AngularJS?**

Following are the disadvantages of AngularJS.

* **Not Secure** − Being JavaScript only framework, application written in AngularJS are not safe. Server side authentication and authorization is must to keep an application secure.
* **Not degradable** − If your application user disables JavaScript then user will just see the basic page and nothing more.

**13.How AngularJS integrates with HTML?**

* AngularJS being a pure javaScript based library integrates easily with HTML.
* **Step 1** − Include angularjs javascript libray in the html page
* <head>
* <script src = "https://ajax.googleapis.com/ajax/libs/angularjs/1.3.14/angular.min.js"></script>
* </head>
* **Step 2** − Point to AngularJS app
* Next we tell what part of the HTML contains the AngularJS app. This done by adding the *ng-app* attribute to the root HTML element of the AngularJS app. You can either add it to *html* element or *body* element as shown below:
* <body ng-app = "myapp">
* </body>