**Question: What is AngularJS?**   
It is an open source javasScript framework which is written in javascript and managed by Google. It is Best for Single Page Applications. It extend the html with new attributes which makes it more useful for UI Developer.

To use Angular JS you need to include just one file i.e.

<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.4.7/angular.min.js"></script>

**Question: In which language, AngularJS is written?**  
javaScript

**Question: When First AngularJS was released?**  
2009

**Question: What is latest version of AngularJS?**  
1.4.7  (Note: for latest version you can see @ <https://angularjs.org/> )

**Question: Who created AngularJS?**  
Misko Hevery started to work on AngularJS in 2009. He was employee of Google.

**Question: Is it opensource?**  
Yes, It is free to use.

**Question: From where we can download the AngularJS File?**

You can download angular js latest version [click to download angular js](https://angularjs.org/)

**Question: Explain what are the key features of Angular JS?**

The main features are :

1. Scope
2. Controller
3. Model
4. View
5. Services
6. Data Binding
7. Directives
8. Filters
9. Testable

| **Keyword** | **Description** |
| --- | --- |
| Template | HTML with additional markup |
| Directives | Extend HTML with custom attributes and elements.  AngularJS **directives** are extended HTML attributes with the prefix **ng-**   1. The **ng-app** directive **initializes** an AngularJS **application**. 2. The **ng-init** directive **initializes** application **data**. 3. The **ng-model** directive **binds** the value of HTML controls (input, select) to application **data**. |
| Model | the data shown to the user in the view and with which the user interacts |
| Scope | context where the model is stored so that controllers, directives and expressions can access it |
| Expressions | access variables and functions from the scope. AngularJS expressions are written inside double braces like **{{ expression }}.  AngularJS expressions** are much like **JavaScript expressions** |
| Compiler | parses the template and instantiates directives and expressions |
| Filter | formats the value of an expression for display to the user |
| View | what the user sees (the DOM) |
| Data Binding | sync data between the model and the view |
| Controller | the business logic behind views |
| Dependency Injection | Creates and wires objects and functions |
| Injector | dependency injection container |
| Module | a container for the different parts of an app including controllers, services, filters, directives which configures the Injector |
| Service | reusable business logic independent of views |

**Question: What is controller in AngularJS?**  
Controller is constructor function in Angular Controller.  
When a Controller is attached to the DOM with use the ng-controller, Angular will instantiate a new Controller object using constructor function.  
  
**Question: Explain what are directives?**  
Directives are used to add new attributes of HTML.  
  
**Question: What are the different types of Directive?**  
Different types of directives are

1. Element directives
2. Attribute directives
3. CSS class directives
4. Comment directives

**Question: Explain what is injector?**  
An injector is a service locator, used to retrieve object instances.  
  
**Question: Explain what are factory method in angularJs?**  
Factory method are used to create the directive. It is invoked only once, when compiler matches the directive for the first time.  
  
**Question: Does Angular use the jQuery library?**  
Ans. Yes, Angular can use jQuery if you have included the jQuery library.  
IF Not, Angular falls back to its own implementation of the subset of jQuery that we call jQLite.  
  
**Question: What is ng-app, ng-init and ng-model?**  
ng-app - To initialize the Angular Application.  
ng-init - To initialize the Angular Application data.  
ng-model - To bind the html tags (input, select, textarea) to Angular Application Data.  
  
**Question: What is Data Binding in Angular JS?**  
It is synchronization of data between the model(Angular Application variable) and view components (display with {{}}).

Angular js use two-way data binding.

**Question: Give an Example of Data-Binding in AngularJS?**

Data-binding in Angular apps is the automatic synchronization of data between the model and view components.

|  |
| --- |
| <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.4.7/angular.min.js"></script>    <input type="text" ng-model="yourName" placeholder="Enter a name here"> <h1>Hello, {{yourName}}!</h1>    Output: Suppose if you type "Webtechsavvy"  **Hello, Webtechsavvy!** |

**Question: What is Looping in AngularJs and Give an Example?**  
It is used to display the data in loop same as foreach in PHP. ng-repeat directive repeats html elements for each item in a collection.

Example:

|  |  |
| --- | --- |
|  | <div data-ng-app="myApp" data-ng-init="names=['Web','Technology','Experts','Notes']">  <b>Loop Example:</b>  <ul>  <li data-ng-repeat="x in names">        {{ x }}      </li>  </ul>  </div>    Output:  **Loop Example:**   * Web * Technology * Experts * Notes |

**Question: How to Write Expression in Angular JS?**

|  |  |
| --- | --- |
|  | <div ng-app="myApp">  <b>Expression: {{ 15 + 55 }}</b>  </div>    Output:  **Expression: 70** |

**Question: How to initiate variable in AngularJS?**

|  |  |
| --- | --- |
|  | <div ng-app="myApp" ng-init="quantity=10;cost=5">  <b>Total Cost: {{ quantity \* cost }}</b>  </div>    Output:  **Total Cost: 50** |

OR

|  |  |
| --- | --- |
|  | <div ng-app="" ng-init="quantity=10;cost=5">  <b>Total Cost: <span ng-bind="quantity \* cost"></span></b>  </div>    Output:  **Total Cost: 50** |

**Question: Example of AngularJS Strings?**

|  |  |
| --- | --- |
|  | <div ng-app="myApp" ng-init="Str1='Web';Str2='Technology'">  Full String is : <b>{{ Str1 + Str2 }}</b>  </div>    Output:  Full String is : **WebTechnology** |

**Question: Example of AngularJS Object?**

|  |  |
| --- | --- |
|  | <div ng-app="myApp" ng-init="myobj={Str1:'Web',Str2:'Technology'}">  String Display: <b>{{ myobj.Str2 }}</b>  </div>    Output:  String Display: **Technology** |

**Question: What is Angular Controllers & give an Example?**

Controller is constructor function in Angular Controller.  
When a Controller is attached to the DOM with use the ng-controller, Angular will instantiate a new Controller object using constructor function.

The AngularJS application is defined by  **ng-app="myApp"**. The application runs inside the <div>.

The **ng-controller="myController"** attribute is an AngularJS directive. It defines a controller.

The **myController**function is a JavaScript function.

AngularJS will invoke the controller with a **$scope** object.

In AngularJS, **$scope** is the application object (the owner of application variables and functions).

The controller creates two properties (variables) in the scope (**firstName** and **lastName**).

The **ng-model** directives bind the input fields to the controller properties (firstName and lastName).

Example:

|  |  |
| --- | --- |
|  | <div ng-app="myApp" ng-controller="myController"> First Name: <input type="text" ng-model="firstName"> Last Name: <input type="text" ng-model="lastName"> <hr/> Full Name: {{firstName + " " + lastName}} </div>  <script> var app = angular.module('myApp', []); app.controller('myController', function($scope) { $scope.firstName = "Girijesh"; $scope.lastName = "Kumar"; }); </script>    **Output:**  **Full Name: Girijesh Kumar** |

**Question: What is Angular Filters & give an Example?**

Filters can be added to expressions and directives using a pipe character.

AngularJS filters can be used to transform data:

|  |  |
| --- | --- |
| **Filter** | **Description** |
| currency | Format a number to a currency format. |
| filter | Select a subset of items from an array. |
| lowercase | Format a string to lower case. |
| orderBy | Orders an array by an expression. |
| uppercase | Format a string to upper case. |

**Example:**

Adding Filter (Currency Filter) to Expressions:

|  |
| --- |
| <div ng-app="myApp" ng-controller="costController">  Quantity: <input type="number" ng-model="quantity"> Price: <input type="number" ng-model="price">  <p>Total = {{ (quantity \* price) }}</p>  </div>  <script> var app = angular.module('myApp', []); app.controller('costController', function($scope) { $scope.quantity = 1; $scope.price = 5.10; }); </script>  Output:  Total = $5.10 |

**Question: AngularJS AJAX - $http?**

**$http** is an AngularJS service for **reading** **data** from **remote servers**.

**$http.get(url)** is the function to use for reading server data.