***Final AngularJS Question***

**1. What are Filters in AngularJS?**

**Answer :** Filters are used to format data before displaying it to the user. They can be used in view templates, controllers, services and directives. There are some built-in filters provided by AngularJS like as Currency, Date, Number, OrderBy, Lowercase, Uppercase etc. You can also create your own filters.

Filter Syntax

{{ expression | filter}}

Filter Example

<script type="text/javascript">

{ { 14 | currency } } //returns $14.00

</script>

**2. What is data binding in AngularJS?**

**Answer :** AngularJS data-binding is the most useful feature which saves you from writing boilerplate code (i.e. the sections of code which is included in many places with little or no alteration). Now, developers are not responsible for manually manipulating the DOM elements and attributes to reflect model changes. AngularJS provides two-way data-binding to handle the synchronization of data between model and view.

**3. What are Expressions in AngularJS?**

**Answer :** AngularJS expressions are much like JavaScript expressions, placed inside HTML templates by using double braces such as: {{expression}}. AngularJS evaluates expressions and then dynamically adds the result to a web page. Like JavaScript expressions, they can contain literals, operators, and variables.

There are some valid AngularJS expressions:

- {{ 1 + 2 }}

- {{ x + y }}

- {{ x == y }}

- {{ x = 2 }}

- {{ user.Id }}

**4. What are Directives in AngularJS?  
 Answer :** AngularJS directives are a combination of AngularJS template markups (HTML attributes or elements, or CSS classes) and supporting JavaScript code. The JavaScript directive code defines the template data and behaviors of the HTML elements.

AngularJS directives are used to extend the HTML vocabulary i.e. they decorate html elements with new behaviors and help to manipulate html elements attributes in interesting way.

There are some built-in directives provided by AngularJS like as ng-app, ng-controller, ng-repeat, ng-model etc.

**5. What is the role of ng-app, ng-init and ng-model directives?   
Answer:** The main role of these directives is explained as:

- ng-app - Initialize the angular app.

- ng-init - Initialize the angular app data.

- ng-model - Bind the html elements like input, select, text area to angular app model.

**6. What is scope in AngularJS?**

**Answer** **:** Scope is a JavaScript object that refers to the application model. It acts as a context for evaluating angular expressions. Basically, it acts as glue between controller and view.

Controller<------> $Scope <------> View

Scopes are hierarchical in nature and follow the DOM structure of your AngularJS app. AngularJS has two scope objects: $rootScope and $scope.

**34. Explain directives ng-if, ng-switch and ng-repeat?**

**Answer :** ng-if – This directive can add / remove HTML elements from the DOM based on an expression. If the expression is true, it add HTML elements to DOM, otherwise HTML elements are removed from the DOM.

<div ng-controller="MyCtrl">

<div ng-if="data.isVisible">ng-if Visible</div>

</div>

<script>

var app = angular.module("app", []);

app.controller("MyCtrl", function ($scope) {

$scope.data = {};

$scope.data.isVisible = true;

});

</script>

ng-switch – This directive can add / remove HTML elements from the DOM conditionally based on scope expression.

<div ng-controller="MyCtrl">

<div ng-switch on="data.case">

<div ng-switch-when="1">Shown when case is 1</div>

<div ng-switch-when="2">Shown when case is 2</div>

<div ng-switch-default>Shown when case is anything else than 1 and 2</div>

</div>

</div>

<script>

var app = angular.module("app", []);

app.controller("MyCtrl", function ($scope) {

$scope.data = {};

$scope.data.case = true;

});

</script>

ng-repeat - This directive is used to iterate over a collection of items and generate HTML from it.

<div ng-controller="MyCtrl">

<ul>

<li ng-repeat="name in names"> {{ name }} </li>

</ul>

</div>

<script>

var app = angular.module("app", []);

app.controller("MyCtrl", function ($scope) {

$scope.names = ['Shailendra', 'Deepak', 'Kamal'];

});

</script>

**8. What are ng-repeat special variables?**

**Answer :** The ng-repeat directive has a set of special variables which you are useful while iterating the collection. These variables are as follows:

- $index

- $first

- $middle

- $last

<html>

<head>

<script src="lib/angular.js"></script>

<script>

var app = angular.module("app", []);

app.controller("ctrl", function ($scope) {

$scope.friends = [

{ name: 'shailendra', gender: 'boy' },

{ name: 'kiran', gender: 'girl' },

{ name: 'deepak', gender: 'boy' },

{ name: 'pooja', gender: 'girl' }

];

});

</script>

</head>

<body ng-app="app">

<div ng-controller="ctrl">

ul class="example-animate-container">

<li ng-repeat="friend in friends">

[{{$index + 1}}] {{friend.name}} is a {{friend.gender}}.

<span ng-if="$first">

(first element found)

</span>

<span ng-if="$middle">

(middle element found)

</span>

<span ng-if="$last">

(last element found)

</span>

</li>

</ul>

</div>

</body>

</html>

The $index contains the index of the element being iterated. The $first, $middle and $last returns a Boolean value depending on whether the current item is the first, middle or last element in the collection being iterated.

**9. Explain Two-way and One-way data binding in AngularJS?   
Answer :** Two-way data binding - It is used to synchronize the data between model and view. It means, any change in model will update the view and vice versa. ng-model directive is used for two-way data binding.

One-way data binding - This binding is introduced in Angular 1.3. An expression that starts with double colon (::), is considered a one-time expression i.e. one-way binding.

**10. Does AngularJS support MVC?**

**Answer :** AngularJS is a MVC framework. It does not implement MVC in the traditional way, but rather something closer to MVVM Model-View-ViewModel).

**11.What is Model, View, Controller in term of AngularJS?**

**Answer: Models**: Models are plain old JavaScript objects that represent data used by your app. Models are also used to represent your app's current state.

**View:** The view is responsible for presenting your models data to end user. Typically it is the HTML markup which exists after AngularJS has parsed and compiled the HTML to include rendered markup and bindings.

**Controller:** The controller defines the actual behavior of your app. It contains business logic for the view and connects the model to view with the help of $scope. A controller is associated with a HTML element with the ng-controller directive.

**12. What are AngularJS Server?**

**Answer:** AngularJS-Server is a reimplementation of several core AngularJS modules with the goal of making it possible to run AngularJS applications on the server, using NodeJS. In the simple case this allows a well-behaved application (one which interacts only with AngularJS's API, not with the browser directly) to render its pages on the server, generating a full HTML page that is readable by search engines.

It also enables more advanced use-cases of sharing code between client and server, such as running only parts of an AngularJS application on the server to produce an RSS feed whose content is rendered from the same templates as the site itself.

**13. What is Service in AngularJS?**

**Answer :** A service is a reusable singleton object which is used to organize and share code across your app. A service can be injected into controllers, filters, directives.

AngularJS offers several built-in services (like $http, $provide, $resource, $window, $parse) which always start with $ sign.

**14. What are AngularJS Provider?**

**Answer:** Provider is used by AngularJS internally to create service , factory etc. During config phase (phase during which AngularJS bootstrap itself). Below mention script can be used to create MathService that we’ve created earlier. Provider is a special factory method with get() which is used to return the value/service/factory.

**15. How to make as ajax call using AngularJS?**

**Answer:**  AngualrJS provide $http control which works as a service to make ajax call to read data from the server. The server makes a database call to get the desired records. AngularJS needs data in JSON format. Once the data is ready, $http can be used to get the data from server in the following manner:

Function studentController($scope,$http){

var url=”data.txt”;

$http.get(url).success(function(response){

$scope.students=response;

});

}

**16. Explain $dirty, $invalid, $error Flags?**

**Answer: $dirty:** It will be TRUE, if the user has already interacted with the form.

**$invalid**: It will be TRUE, if at least one containing form and control is invalid.

**$error**: Is an object hash, containing references to all invalid controls or forms, where:

* keys are validation tokens (error names)
* values are arrays of controls or forms that are invalid with given error.

**17. Write three event directive with example?**

**Answer:** Three event directive are

**ngClick:** The ngClick directive allows you to specify custom behavior when an element is clicked.for Example

<div

ng-click="expression">

...

</div>

**ngMouseUp:** Specify custom behavior on mouseup event. For example

<div

ng-mouseup="expression">

...

</div>

**ngMouseOver:** Specify custom behavior on mouseover event.For example

<ANY

ng-mouseover="expression">

...

</ANY>

**18. How AngularJS expressions are different from the JavaScript expressions?**

**Answer :** AngularJS expressions are much like JavaScript expressions but they are different from JavaScript expressions in the following ways:

1. Angular expressions can be added inside the HTML templates.

2. Angular expressions doesn't support control flow statements (conditionals, loops, or exceptions).

3. Angular expressions support filters to format data before displaying it.

**19. What are the advantages of AngularJS?  
 Answer :** There are following advantages of AngularJS:

- Data Binding - AngularJS provides a powerful data binding mechanism to bind data to HTML elements by using scope.

- Customize & Extensible - AngularJS is customized and extensible as per you requirement. You can create your own custom components like directives, services etc.

-Code Reusability - AngularJS allows you to write code which can be reused. For example custom directive which you can reuse.

- Support – AngularJS is mature community to help you. It has widely support over the internet. Also, AngularJS is supported by Google which gives it an advantage.

- Compatibility - AngularJS is based on JavaScript which makes it easier to integrate with any other JavaScript library and runnable on browsers like IE, Opera, FF, Safari, Chrome etc.

- Testing - AngularJS is designed to be testable so that you can test your AngularJS app components as easy as possible. It has dependency injection at its core, which makes it easy to test.

**20. How AngularJS is different from other JavaScript Framework?   
Answer :** Today, AngularJS is the most popular and dominant JavaScript framework for professional web development. It is well suited for small, large and any sized web app and web application.

AngularJS is different from other JavaScript framework in following ways:

1. AngularJS mark-up lives in the DOM.

2. AngularJS uses plain old JavaScript objects (POJO).

3. AngularJS is leverages with Dependency Injection.

**21. What is dependency Injection?**

**Answer:**  Dependency Injection (DI) is a software design pattern that deals with how components get hold of their dependencies.

The Angular injector subsystem is in charge of creating components, resolving their dependencies, and providing them to other components as requested.