Breifly explain us what is ASP.Net MVC?

ASP.Net MVC is a pattern which is used to split the application's implementation logic into three components i.e. models, views, and controllers.

Tell us something about Model, view and Controllers in Asp.Net MVC?

Model : It is basically a business entity which is used to represent the application data. Controller : The Request which is sent by the user always scatters through controller and it's responsibility is to redirect to the specific view using View () method. View : it's the presentation layer of ASP.Net MVC.

How does the 'page lifecycle' of ASP.Net MVC works?

Below are the processed followed in the sequence -

* App initializWhat is Separation of Concerns in ASP.NET ASP.Net MVCation
* Routing
* Instantiate and execute controller
* Locate and invoke controller action
* Instantiate and render view.
* What is the use of View Model in ASP.Net MVC?
* View Model is a plain class with properties, which is used to bind it to strongly typed view. View Model can have the validation rules defined for its properties using data annotations.
* What you mean by Routing in ASP.Net MVC?
* Routing is a pattern matching mechanism of incoming requests to the URL patterns which are registered in route table. Class : "UrlRoutingModule" is used for the same process.
* What are Actions in ASP.Net MVC?
* Actions are the methods in Controller class which is responsible for returning the view or json data. Action will mainly have return type : "ActionResult" and it will be invoked from method : "InvokeAction()" called by controller.
* What is Attribute Routing in ASP.Net MVC?
* ASP.NET Web API supports this type routing. This is introduced in ASP.Net MVC5. In this type of routing, attributes are being used to define the routes. This type of routing gives more control over classic URI Routing. Attribute Routing can be defined at controller level or at Action level like :
* [Route("{action = TestCategoryList}")] - Controller Level
* [Route("customers/{TestCategoryId:int:min(10)}")] - Action Level
* How to enable Attribute Routing?
* Just add @Model.CustomerName the method : "MapASP.Net MVCAttributeRoutes()" to enable attribute routing as shown below:
* public static void RegisterRoutes(RouteCollection routes)
* {
* routes.IgnoreRoute("{resource}.axd/{\*pathInfo}");
* //enabling attribute routing
* routes.MapASP.Net MVCAttributeRoutes();
* //convention-based routing
* routes.MapRoute
* (
* name: "Default",
* url: "{controller}/{action}/{id}",
* defaults: new { controller = "Customer", action = "GetCustomerList", id = UrlParameter.Optional }
* );
* }
* Explain JSON Binding?
* JavaScript Object Notation (JSON) binding support started from ASP.Net MVC3 onwards via the new JsonValueProviderFactory, which allows the action methods to accept and model-bind data in JSON format. This is useful in Ajax scenarios like client templates and data binding that need to post data back to the server.
* Explain Dependency Resolution?
* Dependency Resolver again has been introduced in ASP.Net MVC3 and it is greatly simplified the use of dependency injection in your applications. This turn to be easier and useful for decoupling the application components and making them easier to test and more configurable.
* Explain Bundle.Config in ASP.Net MVC4?
* "BundleConfig.cs" in ASP.Net MVC4 is used to register the bundles by the bundling and minification system. Many bundles are added by default including jQuery libraries like - jquery.validate, Modernizr, and default CSS references.

How route table has been created in ASP.NET ASP.Net MVC?

Method : "RegisterRoutes()" is used for registering the routes which will be added in "Application\_Start()" method of global.asax file, which is fired when the application is loaded or started.

Which are the important namespaces used in ASP.Net MVC?

Below are the important namespaces used in ASP.Net MVC -

* System.Web.ASP.Net MVC
* System.Web.ASP.Net MVC.Ajax
* System.Web.ASP.Net MVC.Html
* System.Web.ASP.Net MVC.Async
* What is ViewData?
* Viewdata contains the key, value pairs as dictionary and this is derived from class : "ViewDataDictionary". In action method we are setting the value for viewdata and in view the value will be fetched by typecasting.
* What is the difference between ViewBag and ViewData in ASP.Net MVC?
* ViewBag is a wrapper around ViewData, which allows to create dynamic properties. Advantage of viewbag over viewdata will be : In ViewBag no need to typecast the objects as in ViewData. ViewBag will take advantage of dynamic keyword which is introduced in version 4.0. But before using ViewBag we have to keep in mind that ViewBag is slower than ViewData.
* Explain TempData in ASP.Net MVC?
* TempData is again a key, value pair as ViewData. This is derived from "TempDataDictionary" class. TempData is used when the data is to be used in two consecutive requests, this could be between the actions or between the controllers. This requires typecasting in view.
* What are HTML Helpers in ASP.Net MVC?
* HTML Helpers are like controls in traditional web forms. But HTML helpers are more lightweight compared to web controls as it does not hold viewstate and events. HTML Helpers returns the HTML string which can be directly rendered to HTML page. Custom HTML Helpers also can be created by overriding "HtmlHelper" class.
* What are AJAX Helpers in ASP.Net MVC?
* AJAX Helpers are used to create AJAX enabled elements like as Ajax enabled forms and links which performs the request asynchronously and these are extension methods of AJAXHelper class which exists in namespace - System.Web.ASP.Net MVC.

What are the options can be configured in AJAX helpers?

Below are the options in AJAX helpers :

* Url : This is the request URL.
* Confirm : This is used to specify the message which is to be displayed in confirm box.
* OnBegin : Javascript method name to be given here and this will be called before the AJAX request.
* OnComplete : Javascript method name to be given here and this will be called at the end of AJAX request.
* OnSuccess - Javascript method name to be given here and this will be called when AJAX request is successful.
* OnFailure - Javascript method name to be given here and this will be called when AJAX request is failed.
* UpdateTargetId : Target element which is populated from the action returning HTML.
* What is Layout in ASP.Net MVC?
* Layout pages are similar to master pages in traditional web forms. This is used to set the common look across multiple pages. In each child page we can find : /p>
* @{
* Layout = "~/Views/Shared/TestLayout1.cshtml";
* Explain Sections is ASP.Net MVC?
* Section are the part of HTML which is to be rendered in layout page. In Layout page we will use the below syntax for rendering the HTML :
* @RenderSection("TestSection")
* And in child pages we are defining these sections as shown below :
* @section TestSection{
* <h1>Test Content<h1>
* }
* Can you explain RenderBody and RenderPage in ASP.Net MVC?
* RenderBody is like ContentPlaceHolder in web forms. This will exist in layout page and it will render the child pages/views. Layout page will have only one RenderBody() method. RenderPage also exists in Layout page and multiple RenderPage() can be there in Layout page.
* What is ViewStart Page in ASP.Net MVC?
* This page is used to make sure common layout page will be used for multiple views. Code written in this file will be executed first when application is being loaded.

Explain the methods used to render the views in ASP.Net MVC?

Below are the methods used to render the views from action -

* View() : To return the view from action.
* PartialView() : To return the partial view from action.
* RedirectToAction() : To Redirect to different action which can be in same controller or in different controller.
* Redirect() : Similar to "Response.Redirect()" in webforms, used to redirect to specified URL.
* RedirectToRoute() : Redirect to action from the specified URL but URL in the route table has been matched.

What are the sub types of ActionResult?

ActionResult is used to represent the action method result. Below are the subtypes of ActionResult :

* ViewResult
* PartialViewResult
* RedirectToRouteResult
* RedirectResult
* JavascriptResult
* JSONResult
* FileResult
* HTTPStatusCodeResult
* What are Non Action methods in ASP.Net MVC?
* In ASP.Net MVC all public methods have been treated as Actions. So if you are creating a method and if you do not want to use it as an action method then the method has to be decorated with "NonAction" attribute as shown below :
* [NonAction]
* public void TestMethod()
* {
* // Method logic
* }
* How to change the action name in ASP.Net MVC?
* "ActionName" attribute can be used for changing the action name. Below is the sample code snippet to demonstrate more :
* [ActionName("TestActionNew")]
* public ActionResult TestAction()
* {
* return View();
* }
* So in the above code snippet "TestAction" is the original action name and in "ActionName" attribute, name - "TestActionNew" is given. So the caller of this action method will use the name "TestActionNew" to call this action.
* What are Validation Annotations?
* Data annotations are attributes which can be found in the "System.ComponentModel.DataAnnotations" namespace. These attributes will be used for server-side validation and client-side validation is also supported. Four attributes - Required, String Length, Regular Expression and Range are used to cover the common validation scenarios.
* Why to use Html.Partial in ASP.Net MVC?
* This method is used to render the specified partial view as an HTML string. This method does not depend on any action methods. We can use this like below : @Html.Partial("TestPartialView")
* What is Html.RenderPartial?
* Result of the method : "RenderPartial" is directly written to the HTML response. This method does not return anything (void). This method also does not depend on action methods. RenderPartial() method calls "Write()" internally and we have to make sure that "RenderPartial" method is enclosed in the bracket. Below is the sample code snippet : @{Html.RenderPartial("TestPartialView"); }
* What is RouteConfig.cs in ASP.Net MVC 4?
* "RouteConfig.cs" holds the routing configuration for ASP.Net MVC. RouteConfig will be initialized on Application\_Start event registered in Global.asax.
* What are Scaffold templates in ASP.Net MVC?
* Scaffolding in ASP.NET ASP.Net MVC is used to generate the Controllers,Model and Views for create, read, update, and delete (CRUD) functionality in an application. The scaffolding will be knowing the naming conventions used for models and controllers and views.

Explain the types of Scaffoldings.

Below are the types of scaffoldings :

* Empty
* Create
* Delete
* Details
* Edit
* List

What is PartialView in ASP.Net MVC?

PartialView is similar to UserControls in traditional web forms. For re-usability purpose partial views are used. Since it's been shared with multiple views these are kept in shared folder. Partial Views can be rendered in following ways :

* Html.Partial()
* Html.RenderPartial()
* What is the need of Action Filters in ASP.Net MVC?
* Action Filters allow us to execute the code before or after action has been executed. This can be done by decorating the action methods of controls with ASP.Net MVC attributes.

Mention some action filters which are used regularly in ASP.Net MVC?

Below are some action filters used :

* Authentication
* Authorization
* HandleError
* OutputCache
* How to make sure Client Validation is enabled in ASP.Net MVC?
* In Web.Config there are tags called : "ClientValidationEnabled" and "UnobtrusiveJavaScriptEnabled". We can set the client side validation just by setting these two tags "true", then this setting will be applied at the application level.
* < add key="ClientValidationEnabled" value="true" />
* < add key="UnobtrusiveJavaScriptEnabled" value="true" />
* Explain Keep method in Tempdata in ASP.Net MVC?
* As explained above in case data in Tempdata has been read in current request only then "Keep" method has been used to make it available for the subsequent request.
* @TempData["TestData"];
* TempData.Keep("TestData");
* Explain Peek method in Tempdata in ASP.Net MVC?
* Similar to Keep method we have one more method called "Peek" which is used for the same purpose. This method used to read data in Tempdata and it maintains the data for subsequent request.
* string A4str = TempData.Peek("TT").ToString();

**3) Explain the new features added in version 4 of MVC (MVC4)?**

Following are features added newly –

* Mobile templates
* Added ASP.NET Web API template for creating REST based services.
* Asynchronous controller task support.
* Bundling the java scripts.
* Segregating the configs for MVC routing, Web API, Bundle etc.