

## ASP.NET MVC 5

### Workshop Details:

<b>Duration:</b>	3 Days
<b>Objective:</b>	Developing MVC 5 Web Applications
<b>Participants' Entry Profile:</b>	Participants attending this workshop must have worked on: <ul style="list-style-type: none"> <li>▪ Worked on .NET 4.0</li> <li>▪ Knowledge of earlier version of MVC will be added advantage</li> </ul>
<b>Training Methodology:</b>	The workshop will follow Synergetics methodology of Concept Visualization Active Experimentation Application Development. The workshop will be 100% Hands-On with each participant having access to system during the session

### Setup Requirements

<b>Hardware and Software Requirements:</b>	Participant's as well as Trainer's Machine are required to have: <b>Hardware / Software</b> <ul style="list-style-type: none"> <li>▪ Pentium 4 2.0 GHz and above</li> <li>▪ 2 GB RAM</li> <li>▪ LAN Connectivity</li> <li>▪ 500MB HDD (Free Space)</li> <li>▪ Windows 7 or Windows 8 or above</li> <li>▪ IIS 7 and above</li> <li>▪ Microsoft SQL Server 2012</li> <li>▪ Microsoft Visual Studio 2013 ultimate</li> </ul>
<b>Training Lab Requirements:</b>	Whiteboard 6 feet by 4 feet (minimum) Whiteboard markers – Red, Blue, Green, Black Video Projector (1024 X 768 resolutions)

## Course Content

<b>Day 1</b>	<ul style="list-style-type: none"> <li>➤ <b>Fundamentals of ASP.NET MVC</b> <ul style="list-style-type: none"> <li>■ ASP.NET MVC Architecture</li> <li>■ ASP.NET Web Forms vs. ASP.NET MVC</li> <li>■ Page Controller and Front Controller</li> <li>■ Structure of an ASP.NET MVC application</li> </ul> </li>   <li>➤ <b>ASP.NET MVC 5 project structure</b> <ul style="list-style-type: none"> <li>■ Working with Visual Studio MVC 5 Projects templates</li> <li>■ ASP.NET MVC Project folder- Model, Views, Controller</li> <li>■ MVC Framework and Application Structure</li> <li>■ MVC Application Execution Process</li> <li>■ ASP.NET MVC Application using Areas</li> </ul> </li>   <li>➤ <b>Overview of Models, Views, and Controllers</b> <ul style="list-style-type: none"> <li>■ Controllers and Action Methods</li> <li>■ Views and UI Rendering</li> <li>■ Models</li> </ul> </li>   <li>➤ <b>URL routing in ASP.NET MVC</b> <ul style="list-style-type: none"> <li>■ Introduction to Routes</li> <li>■ URL Patterns</li> <li>■ Adding Routes to an MVC Application</li> <li>■ Default Values for URL Parameters</li> <li>■ Handling Segments in a URL Pattern</li> <li>■ Adding Constraints to Routes</li> <li>■ Creating URLs from Routes</li> <li>■ URL Parameters in a Routed Page</li> <li>■ MVC 5 Attribute routing</li> </ul> </li>   <li>➤ <b>View engine in ASP.NET MVC</b> <ul style="list-style-type: none"> <li>■ Introduction</li> <li>■ Razor's Goals</li> <li>■ Models and View Data</li> <li>■ HTML Helpers</li> <li>■ Partial Views</li> <li>■ Layout Views</li> <li>■ Creating Custom HTML Helpers</li> </ul> </li>   <li>➤ <b>Controller &amp; Filters in Detail</b> <ul style="list-style-type: none"> <li>■ Role of Controllers in MVC</li> <li>■ Type of ActionResult</li> <li>■ ViewBag, ViewData or TempData</li> <li>■ Asynchronous Controller</li> </ul> </li> </ul>
<b>Day 2</b>	<ul style="list-style-type: none"> <li>➤ <b>Filters</b> <ul style="list-style-type: none"> <li>■ Filtering action methods</li> <li>■ Global action filters</li> <li>■ Creating Custom Action Filters</li> <li>■ Handling errors in MVC applications</li> </ul> </li> </ul>

	<ul style="list-style-type: none"><li>■ ASP.NET MVC 5 Authentication Filters</li><li>➤ <b>Models in Details</b><ul style="list-style-type: none"><li>■ Model Validation</li><li>■ Data Annotations</li><li>■ Custom Validation</li><li>■ Self-validating models</li><li>■ Client validation</li><li>■ Remote validation</li></ul></li><li>➤ <b>Entity Framework</b><ul style="list-style-type: none"><li>■ Code First: Convention over Configuration</li><li>■ Creating a Data Access Layer with Entity Framework Code First</li><li>■ Validating Data</li><li>■ Specifying Business Rules with Data Annotations</li><li>■ Displaying Validation Errors</li></ul></li><li>➤ <b>Dependency Resolution</b><ul style="list-style-type: none"><li>■ Introduction</li><li>■ Dependency Resolution</li><li>■ Benefits</li><li>■ Controller Injection</li><li>■ Controller Factories</li></ul></li></ul>
Day 3	<ul style="list-style-type: none"><li>➤ <b>The ASP.NET MVC 5 &amp; Web API 2</b><ul style="list-style-type: none"><li>■ Building a Data Service</li><li>■ Registering Web API Routes</li><li>■ Hooking Up the API</li><li>■ Querying Data</li><li>■ Exception Handling</li><li>■ Media Formatters</li></ul></li><li>➤ <b>Authentication and Authorization</b><ul style="list-style-type: none"><li>■ Using Windows Authentication</li><li>■ Using Forms Authentication</li><li>■ Using Membership, Roles, and Profiles</li><li>■ AuthorizeAttribute class</li><li>■ Create an ASP.NET MVC 5 App with Facebook and Google OAuth2 and Open ID Sign-on</li></ul></li><li>➤ <b>Testing ASP.NET MVC applications</b><ul style="list-style-type: none"><li>■ TDD and Unit Testing with ASP.NET MVC</li><li>■ Building Testable ASP.NET MVC Applications</li></ul></li></ul>