



# Master Presenter's Manual

*For*

*Web Application Development  
(ASP.NET MVC)*

***Effective from: September, 2017  
Ver. 1.0***

## Amendment Record

Version No.	Effective Date	Change	Replaced Pages
1.0	September 2017	New	-

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## 1. Introduction

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At the end of this course, students will be able to:

- Describe the Microsoft Web Technologies stack and select an appropriate technology to use to develop any given application.
- Design the architecture and implementation of a web application that will meet a set of functional requirements, user interface requirements, and address business models.
- Create MVC Models and write code that implements business logic within Model methods, properties, and events.
- Add Controllers to an MVC Application to manage user interaction, update models, and select and return Views.
- Create Views in an MVC application that display and edit data and interact with Models and Controllers.
- Run unit tests and debugging tools against a web application in Visual Studio 2012.
- Develop a web application that uses the ASP.NET routing engine to present friendly URLs and a logical navigation hierarchy to users.
- Implement a consistent look and feel, including corporate branding, across an entire MVC web application.
- Use partial page updates and caching to reduce the network bandwidth used by an application and accelerate responses to user requests.
- Write JavaScript code that runs on the client-side and utilizes the jQuery script library to optimize the responsiveness of an MVC web application.
- Implement a complete membership system in an MVC 4 web application.
- Build an MVC application that resists malicious attacks and persists information about users and preferences.
- Describe how to write a Windows Azure web service and call it from an MVC application.
- Describe what a Web API is and why developers might add a Web API to an application.
- Modify the way browser requests are handled by an MVC application.
- Describe how to package and deploy an ASP.NET MVC 4 web application from a development computer to a web server for staging or production.

## 2. Information on Session Allocation

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Module	Online Sessions (No. of Hrs)
Developing ASP.NET MVC Web Applications	40

Throughout this Presenter's Manual, the module, **Developing ASP.NET MVC Web Applications**, will be referred to as **MVC**.








### 3. Module Deliverables available on OnlineVarsity



To aid the learning process, following are the deliverables

#### Student Deliverables:

1. Learner's Guide (eBook)

Resources available on OnlineVarsity for Students:

Icons	Feature - Description/Functionality
	<b>Download Book</b> - Student has the option to download the subject related e-book and read offline.
	<b>Glossary</b> - Student can access a list of subject related specialized words with their definitions.
	<b>FAQ</b> - Student can access frequently asked questions and their answers.
	<b>Show Me How</b> - Student can view a step-wise simulation/demonstration of the module related topics.
	<b>Practice 4 Me</b> - Student can test and evaluate their understanding of module related topics.
	<b>Work Assignments</b> - Student can solve scenario based lab assignments (Hands-on). The faculty will evaluate and give their feedbacks.
	<b>References</b> - Student can access additional subject related material for reading.

	<b>Feedback</b> - Student can provide feedback on the course material.
	<b>Ask to Learn</b> – Student can submit subject related technical queries. Queries submitted will be directed to the particular course coordinator/head.

#### 4. Week-wise Session Schedule

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- A Session has duration of 2 hrs

Wk	Day 1	Day 2	Day 3	Day 4
1	Session 1 MVC – TL1	Session 2 MVC – TL2	Session 3 MVC – TL3	Session 4 MVC – TL4
2	Session 5 MVC – TL5	Session 6 MVC – TL6	Session 7 MVC – TL7	Session 8 MVC – TL8
3	Session 9 MVC – TL9	Session 10 MVC – TL10	Session 11 MVC – TL11	Session 12 MVC – TL12
5	Session 13 MVC – TL13	Session 14 MVC – TL14	Session 15 MVC – TL15	Session 16 MVC – TL16
6	Session 17 MVC – TL17	Session 18 MVC – TL18	Session 19 MVC – TL19	Session 20 MVC – TL20

**MVC:** Web Application Development

**TL:** Online Session

## 5. Session Coverage

Session No.	Session Title	Session Details	Deliverables' Mapping
1	MVC – TL1	<p>All the topics as listed below from Session 1 and Session 2 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 1 – Introduction to ASP.NET MVC</u></b></p> <ul style="list-style-type: none"> <li>➤ Overview of Web Application Development</li> <li>➤ Evolution of ASP.NET MVC</li> <li>➤ Supporting Technologies</li> <li>➤ MVC Support in Visual Studio 2013</li> </ul> <p><b><u>Session 2 – Controllers in ASP.NET MVC</u></b></p> <ul style="list-style-type: none"> <li>➤ Working with Controllers</li> <li>➤ Routing Requests</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 1 &amp; 2 XP - Session 1 &amp; 2 TG - Session 1 &amp; 2</p>
2	MVC – TL2	<p>All the workshop topics given in Session 1 and Session 2 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 1 &amp; 2 <b>(OnlineVarsity)</b></p>
3	MVC – TL3	<p>All the topics as listed below from Session 3 and Session 4 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 3 – Views in ASP.NET MVC</u></b></p> <ul style="list-style-type: none"> <li>➤ Working with Views</li> <li>➤ Razor</li> <li>➤ HTML Helper Methods</li> </ul> <p><b><u>Session 4 – Models in ASP.NET MVC</u></b></p> <ul style="list-style-type: none"> <li>➤ Introducing Models</li> <li>➤ Role of Model Binder</li> <li>➤ Visual Studio.NET Scaffolding</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 3 &amp; 4 XP - Session 3 &amp; 4 TG - Session 3 &amp; 4</p>



Session No.	Session Title	Session Details	Deliverables' Mapping
4	MVC – TL4	All the workshop topics given in Session 3 and Session 4 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.	<b><u>Developing ASP.NET MVC Web Applications</u></b>  Session 3 & 4  (OnlineVarsity)
5	MVC – TL5	<p>All the topics as listed below from Session 5 and Session 6 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 5 – Data Validation and Annotation</u></b></p> <ul style="list-style-type: none"> <li>➤ Data Validation</li> <li>➤ Data Annotation</li> <li>➤ ModelState Validation</li> </ul> <p><b><u>Session 6 – Data Access</u></b></p> <ul style="list-style-type: none"> <li>➤ Entity Framework</li> <li>➤ Working with Entity Framework</li> <li>➤ Initializing a Database with Test Data</li> <li>➤ LINQ Query</li> <li>➤ LINQ Data Providers</li> </ul>	<b><u>Developing ASP.NET MVC Web Applications</u></b>  SG - Session 5 & 6 XP - Session 5 & 6 TG - Session 5 & 6
6	MVC – TL6	All the workshop topics given in Session 5 and Session 6 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.	<b><u>Developing ASP.NET MVC Web Applications</u></b>  Session 5 & 6  (OnlineVarsity)

Session No.	Session Title	Session Details	Deliverables' Mapping
7	MVC – TL7	<p>All the topics as listed below from Session 7 and Session 8 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 7 – Consistent Styles and Layouts</u></b></p> <ul style="list-style-type: none"> <li>➤ Consistent Look and Feel Using Layouts</li> <li>➤ Implementing Styles</li> </ul> <p><b><u>Session 8 – Responsive Pages</u></b></p> <ul style="list-style-type: none"> <li>➤ Using JavaScript</li> <li>➤ Introducing JQuery</li> <li>➤ Introducing AJAX</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 7 &amp; 8 XP - Session 7 &amp; 8 TG - Session 7 &amp; 8</p>
8	MVC – TL8	<p>All the workshop topics given in Session 7 and Session 8 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 7 &amp; 8</p> <p><b>(OnlineVarsity)</b></p>
9	MVC – TL9	<p>All the topics as listed below from Session 9 and Session 10 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 9 – State Management and Optimization</u></b></p> <ul style="list-style-type: none"> <li>➤ State Management</li> <li>➤ Optimizing Web Application Performance</li> <li>➤ Bundling and Minification</li> </ul> <p><b><u>Session 10 – Authentication and Authorization</u></b></p> <ul style="list-style-type: none"> <li>➤ Authentication</li> <li>➤ Authorization</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 9 &amp; 10 XP - Session 9 &amp; 10 TG - Session 9 &amp; 10</p>
10	MVC – TL10	<p>All the workshop topics given in Session 9 and Session 10 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 9 &amp; 10</p> <p><b>(OnlineVarsity)</b></p>

Session No.	Session Title	Session Details	Deliverables' Mapping
11	MVC – TL11	<p>All the topics as listed below from Session 11 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 11 – Security</u></b></p> <ul style="list-style-type: none"> <li>➤ Malicious Attacks and their Preventions</li> <li>➤ Data Security</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 11 XP - Session 11 TG - Session 11</p>
12	MVC – TL12	<p>All the workshop topics given in Session 11 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 11 <b>(OnlineVarsity)</b></p>
13	MVC – TL13	<p>All the topics as listed below from Session 12 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 12 – Globalization</u></b></p> <ul style="list-style-type: none"> <li>➤ Implementing Internationalization</li> <li>➤ Implementing Localization</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 12 XP - Session 12 TG - Session 12</p>
14	MVC – TL14	<p>All the workshop topics given in Session 12 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 12 <b>(OnlineVarsity)</b></p>
15	MVC – TL15	<p>All the topics as listed below from Session 13 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 13 – Debugging and Monitoring</u></b></p> <ul style="list-style-type: none"> <li>➤ Debugging</li> <li>➤ Health Monitoring</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 13 XP - Session 13 TG - Session 13</p>
16	MVC – TL16	<p>All the workshop topics given in Session 13 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 13 <b>(OnlineVarsity)</b></p>

Session No.	Session Title	Session Details	Deliverables' Mapping
17	MVC – TL17	<p>All the topics as listed below from Session 14 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 14 –Advanced Concepts of ASP.NET MVC</u></b></p> <ul style="list-style-type: none"> <li>➤ Request Handling</li> <li>➤ Filters</li> <li>➤ Introduction to Web API</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 14 XP - Session 14 TG - Session 14</p>
18	MVC – TL18	<p>All the workshop topics given in Session 14 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 14 (OnlineVarsity)</p>
19	MVC – TL19	<p>All the topics as listed below from Session 15 of <i>Developing ASP.NET MVC Web Applications</i> book should be covered in this session.</p> <p><b><u>Session 15 –Testing and Deploying</u></b></p> <ul style="list-style-type: none"> <li>➤ Testing</li> <li>➤ Preparing the Application for Deployment</li> <li>➤ Deploying on IIS</li> </ul>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>SG - Session 15 XP - Session 15 TG - Session 15</p>
20	MVC – TL20	<p>All the workshop topics given in Session 15 of <i>Developing ASP.NET MVC Web Applications</i> course should be covered in this session.</p>	<p><b><u>Developing ASP.NET MVC Web Applications</u></b></p> <p>Session 15 (OnlineVarsity)</p>

## 6. Library References

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| ➤ <b>Exam Ref 70-486 - Developing ASP.NET MVC 4 Web Applications</b> by William Penberthy |
| ➤ <b>Pro ASP.NET MVC 4</b> by Adam Freeman  |

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