

VERSION

2

CRASH COURSE

ELYSIUM
ACADEMY
CORE .NET
COURSE
**ELYSIUM
ACADEMY
CORE .NET
COURSE**

SR. CODE

EAPL/CRASH/CRTC10

COURSE CODE

EACDN

SUB CATEGORY

SOFTWARE DEVELOPMENT



TOTAL DURATION
45
HOURS



THEORY TAKEN
10
HOURS



PRACTICAL TAKEN
35
HOURS

ELYSIUM
ACADEMY
CORE .NET
COURSE
ELYSIUM
ACADEMY

COURSE DESCRIPTION



The Core .NET course provides comprehensive training in Microsoft's .NET framework, covering essential concepts such as C# programming, ASP.NET web development, and SQL Server database integration. Participants will learn to design, develop, and deploy robust and scalable applications using the .NET framework

COURSE GOALS



The goal of the Core .NET course is to equip participants with the knowledge and skills necessary to become proficient .NET developers. By the end of the course, participants will be able to design and develop feature-rich applications using the .NET framework, implement secure and efficient code, and leverage .NET tools and libraries for optimal performance and productivity.

FUTURE SCOPE



Proficiency in .NET opens doors to a variety of career opportunities, including roles such as .NET developer, software engineer, web developer, and application developer. With the continuous evolution of the .NET framework and its widespread adoption across industries, skilled .NET developers are career prospects in software development and engineering.

01

CHAPTER

1. Introduction to ASP.Net MVC

- 1.1. What is ASP.NET MVC
- 1.2. What are the differences between ASP.NET Forms and ASP.NET MVC?
- 1.3. History of ASP.NET MVC
- 1.4. Creating an ASP.NET MVC Application
- 1.5. The Architecture of ASP.NET MVC Internet Application
- 1.6. ASP.NET MVC Folder Conventions

2. ASP.NET MVC – Basic

- 2.1. ASP.NET MVC Introduction
- 2.2. ASP.NET MVC vs. ASP.NET Web Forms
- 2.3. Advantages of ASP.NET MVC
- 2.4. ASP.NET MVC Architecture
- 2.5. ASP.NET MVC Version History
- 2.6. Creating First ASP.NET MVC Application
- 2.7. ASP.NET MVC File and Folder Structure
- 2.8. Layout, Sections, and View Start
- 2.9. Controllers in ASP.NET MVC Application
- 2.10. Views in ASP.NET MVC
- 2.11. Models in ASP.NET MVC
- 2.12. View Data in ASP.NET MVC
- 2.13. View Bag in ASP.NET MVC
- 2.14. Strongly Typed Views in ASP.NET MVC
- 2.15. View Model in ASP.NET MVC
- 2.16. Temp Data in ASP.NET MVC



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3.30
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02

CHAPTER

1. Controllers

- 1.1. What is a Controller and what is Use of It?
- 1.2. Overview of routing engine
- 1.3. Creating controllers
- 1.4. Return types of Action Methods and Their Purpose

2. Views

- 2.1. What is a view and what is use of it?
- 2.2. View engines. ASPX Engine and Razor View Engine
- 2.3. Razor View Engine syntax
- 2.4. Partial views
- 2.5. What is Partial Views? What is the use of it?
- 2.6. Creating partial views
- 2.7. Using Partial Views

3. Models

- 3.1. What is a Model and what is the use of a Model?
- 3.2. Types Of Models
- 3.3. Creating Data Model



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03

CHAPTER

1. Html Helpers

- 1.1. What is Html Helper and what is the use of it?
- 1.2. Creating Html Helpers
- 1.3. Strongly Typed Html Helpers
- 1.4. Template Html Helpers
- 1.5. Creating custom Html Helpers
- 1.6. Creating submit button html helper
- 1.7. Creating TagBuilder Html Class
- 1.8. Using HtmlTextWriter Class

2. Data Annotations & Validations

- 2.1. What is data Annotation and what is the use of it?
- 2.2. Data Annotation Attributes in ASP.NET MVC
- 2.3. Annotation Attributes from System.Web.Mvc Namespace
- 2.4. Custom Error Messages and Localization
- 2.5. Display and Edit Annotations



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04

CHAPTER

1. CRUD Operations on Database using ASP.Net MVC

- 1.1. What are CRUD Operations
- 1.2. How To Implement CRUD Operations With ASP.Net MVC



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2. Filters

- 2.1. What is a Filter and What is the Use Of A Filter
- 2.2. Applying Filters To Controllers And Actions
- 2.3. Authorization Filter
- 2.4. Exception Filter
- 2.5. Using Action Filter
- 2.6. Using Result Filter
- 2.7. Using Global Filter

3. URL Routing

- 3.1. What is URL Routing and what are Advantages of It?
- 3.2. Creating and Registering a Route
- 3.3. Defining Default Values
- 3.4. Using Static URL Segments
- 3.5. Route Ordering
- 3.6. Defining Optional URL Segments
- 3.7. Defining Variable Length Routes

05

CHAPTER

1. Master Pages and Layout Pages

- 1.1. What is a Master Page and what is a Layout Page?
- 1.2. Purpose of Master Page or Layout Page
- 1.3. Creating Layout Pages



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1.4. Using Layout Pages

2. Caching in ASP.Net MVC

2.1. What is Caching? What is Use of Caching?

2.2. Using Output Cache Attribute

2.3. Varying Output By Parameter

2.4. Using Cache Profiles

2.5. Using The Cache API

3. Authentication in ASP.Net MVC

3.1. Creating Users and Roles

3.2. Using the Web Site Administration Tool

3.3. Using the Web Site Administration Tool

3.4. Using the Account Controller

3.5. Authorizing Users

3.6. Using the Authorize Attribute

3.7. Using the User Property

3.8. Configuring Membership

3.9. Configuring the Membership Database

3.10. Configuring Membership Settings

3.11. Using the Membership and Role Manager API

3.12. Using Windows Authentication

3.13. Configuring Windows Authentication

3.14. Authenticating Windows Users and Groups

06

CHAPTER

1. Exception Handling in ASP.NET MVC

- 1.1. Introduction to Exception Handling in MVC
- 1.2. HandleError
- 1.3. HTTP Errors
- 1.4. Application_Error

2. ASP.NET MVC – Routing

- 2.1. Routing in ASP.NET MVC
- 2.2. Creating Custom Routes in ASP.NET MVC
- 2.3. Route Constraints in ASP.NET MVC
- 2.4. Attribute Routing in ASP.NET MVC
- 2.5. NET MVC Attribute Routing with Optional Parameter
- 2.6. Route Prefix in ASP.NET MVC Attribute Routing
- 2.7. Route Constraints in ASP.NET MVC Attribute Routing
- 2.8. Default Route and Route Name in Attribute Routing



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07

CHAPTER

1. ASP.NET MVC – Database (SQL Server and MySQL)

- 1.1. Entity Framework in ASP.NET MVC
- 1.2. Action Link HTML Helper in ASP.NET MVC
- 1.3. Working with Multiple Tables in ASP.NET MVC using Entity Framework



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- 1.4. Business Objects as Model in ASP.NET MVC
- 1.5. FormCollection in ASP.NET MVC
- 1.6. Model Binding in ASP.NET MVC
- 1.7. UpdateModel and TryUpdateModel in ASP.NET MVC
- 1.8. Editing a Model in ASP.NET MVC
- 1.9. Unintended Updates in ASP.NET MVC
- 1.10. Bind Attribute in ASP.NET MVC
- 1.11. Model Binding Using Interface
- 1.12. Deleting Database Records in ASP.NET MVC
- 1.13. CRUD Operations using Entity Framework
- 1.14. Customizing Auto Generated Index and Create Views
- 1.15. Customizing Auto Generated Edit View
- 1.16. Performing CRUD Operation using Entity Framework and MySQL Database

2. ASP.NET MVC – HTML Helpers

- 2.1. HTML Helpers in ASP.NET MVC
- 2.2. Text Box HTML Helper in ASP.NET MVC
- 2.3. Drop Down List HTML Helper in ASP.NET MVC
- 2.4. Radio Button HTML Helper in MVC
- 2.5. Check Box HTML Helper in ASP.NET MVC
- 2.6. List Box HTML Helper in ASP.NET MVC
- 2.7. Editor HTML Helper in ASP.NET MVC

2.8. Password Field and Hidden Field
HTML Helper in ASP.NET MVC

2.9. Template Helpers in ASP.NET MVC

2.10. Customizing Template Helpers in
ASP.NET MVC

2.11. Custom HTML Helpers in ASP.NET MVC

3. ASP.NET MVC – Attributes

3.1. Attributes in ASP.NET MVC

3.2. Action Selectors in ASP.NET MVC

3.3. Action Verb Selector in ASP.NET MVC

3.4. Non-Action Selector in ASP.NET MVC

4. ASP.NET MVC – Data Annotations

4.1. Data Annotations in ASP.NET MVC

4.2. Required and StringLength
Attribute in MVC

4.3. Regular Expression Attribute in
ASP.NET MVC

4.4. Range Attribute in ASP.NET MVC

4.5. Custom Validation Attribute in MVC

4.6. DataType and Compare Attributes
in ASP.NET MVC

4.7. Validation Message and Validation
Summary in ASP.NET MVC

4.8. Remote Validations in ASP.NET MVC

4.9. Remote Validation in ASP.NET MVC
when JavaScript is Disabled

4.10. Fluent Validations

5. ASP.NET MVC – Action Results

- 5.1. Action Results in ASP.NET MVC
- 5.2. View Result and Partial View Result in MVC
- 5.3. JSON Result in ASP.NET MVC
- 5.4. JavaScript Result in ASP.NET
- 5.5. File Result in ASP.NET MVC
- 5.6. Content Result in ASP.NET MVC
- 5.7. Empty Result in ASP.NET MVC
- 5.8. Redirect, RedirectToRoute and RedirectToAction in ASP.NET MVC
- 5.9. Status Results in ASP.NET MVC

6. ASP.NET MVC – Views

- 6.1. Partial Views in ASP.NET MVC
- 6.2. Different Ways to Render Partial View in ASP.NET MVC
- 6.3. Razer View Syntax in MVC

08

CHAPTER

1. Service Pattern and Repository Pattern

- 1.1. Service Pattern
- 1.2. Architecture with Service Pattern
- 1.3. Dependency Injection
- 1.4. Repository Pattern

2. ASP.NET MVC – Filters

- 2.1. Filters in ASP.NET MVC



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- 2.2. Exception Filter in ASP.NET MVC
- 2.3. Custom Exception Filter in ASP.NET MVC
- 2.4. Error Pages Based on Status Code in ASP.NET MVC
- 2.5. ChildActionOnly Attribute in ASP.NET MVC
- 2.6. OutputCache Attribute in MVC
- 2.7. VaryByParam Location and CacheProfiles in OutputCache Attribute in MVC
- 2.8. Custom OutputCache Attribute in ASP.NET MVC
- 2.9. ValidateInput Attribute in ASP.NET MVC
- 2.10. RequireHttps Attribute in ASP.NET MVC
- 2.11. Custom Action Filters in ASP.NET MVC
- 2.12. Filter Overrides in ASP.NET MVC
- 2.13. Authorization Filter in ASP.NET MVC
- 2.14. Custom Authorization Filter in MVC
- 2.15. Custom Authentication Filter in MVC

3. ASP.NET MVC – Security

- 3.1. Authentication and Authorization in ASP.NET MVC
- 3.2. Forms Authentication in ASP.NET MVC
- 3.3. Role-Based Authentication in ASP.NET MVC
- 3.4. Role-Based Menus in MVC
- 3.5. Create an ASP.NET MVC 5 App with Facebook, Twitter, LinkedIn, and Google OAuth2 Sign-on

3.6. Create a secure ASP.NET MVC 5 web app with log-in, email confirmation, and password reset

3.7. NET MVC 5 app with SMS and email Two-Factor Authentication

3.8. XSRF/CSRF Prevention in ASP.NET MVC and Web Pages

3.9. Preventing Open Redirection Attacks (C#)

4. ASP.NET Identity

4.1. Intro to Asp.Net Identity

4.2. Creating ApplicationUser, Store, and Manager

4.3. Configuring Roles

4.4. Understanding ViewModel

4.5. Register Page

4.6. Login Page

4.7. Logout

4.8. MyProfile Page

4.9. What is Area and Creating "Admin" Area

4.10. Manager Area

4.11. Manage Users by Admin

Placement Assistance

100%

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90%

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Corporate Placements

65%

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