



Sanisoft
information technologies



MICROSOFT CERTIFIED SOLUTION ASSOCIATE

MCSA

Web Applications

This training help you gain expertise at implementing modern web apps.

Programming in HTML5 with JavaScript and CSS3

Overview

This course provides an introduction to HTML5, CSS3, and JavaScript. This course helps students gain basic HTML5/CSS3/JavaScript programming skills. This course is an entry point into both the Web application and Windows Store apps training paths. The course focuses on using HTML5/CSS3/JavaScript to implement programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured applications.

The lab scenarios in this course are selected to support and demonstrate the structure of various application scenarios. They are intended to focus on the principals and coding components/structures that are used to establish an HTML5 software application.

This course uses Visual Studio 2012, running on Windows 8.

Duration: 120 HRS

Prerequisites:

In addition to their professional experience, students who attend this training should have a combination of practical and conceptual knowledge related to HTML5 programming. This includes the following prerequisites:

- Understand the basic HTML document structure:
- Use HTML tags to display text content.
- Use HTML tags to display graphics.
- Use HTML APIs.
- Understand how to style common HTML elements using CSS, including:
 - Separating presentation from content.
 - Managing content flow.
 - Managing positioning of individual elements.
 - Managing content overflow.
- Basic CSS styling.

Course Exam:

Code	Name	Duration
70-480	Programming in HTML5 with JavaScript and CSS3	40 HRS
70-483	Programming in C#	40 HRS
70-486	Developing ASP.NET MVC 5 Web Applications	40 HRS

Course Objectives

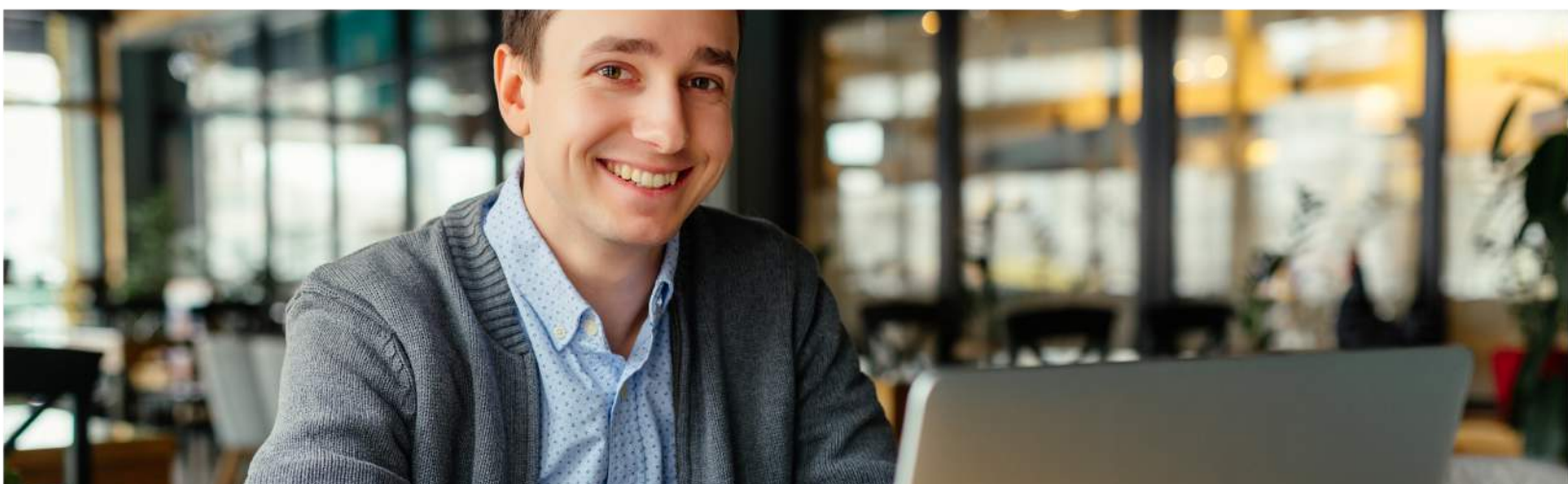
- Explain how to use Visual Studio 2012 to create and run a Web application.
- Describe the new features of HTML5, and create and style HTML5 pages.
- Add interactivity to an HTML5 page by using JavaScript.
- Create HTML5 forms by using different input types, and validate user input by using HTML5 attributes and JavaScript code.
- Send and receive data to and from a remote data source by using XMLHttpRequest objects and jQuery AJAX operations.
- Style HTML5 pages by using CSS3.
- Create well-structured and easily-maintainable JavaScript code.
- Use common HTML5 APIs in interactive Web applications.
- Create Web applications that support offline operations.
- Create HTML5 Web pages that can adapt to different devices and form factors.
- Add advanced graphics to an HTML5 page by using Canvas elements, and by using and Scalable Vector Graphics.
- Enhance the user experience by adding animations to an HTML5 page.
- Use Web Sockets to send and receive data between a Web application and a server.
- Improve the responsiveness of a Web application that performs long-running operations by using Web Worker processes.



Course Outline

Programming in HTML5 with JavaScript and CSS3

- Module 1: Overview of HTML and CSS
- Module 2: Creating and Styling HTML Pages
- Module 3: Introduction to JavaScript
- Module 4: Creating Forms to Collect and Validate User Input
- Module 5: Communicating with a Remote Server
- Module 6: Styling HTML5 by Using CSS3
- Module 7: Creating Objects and Methods by Using JavaScript
- Module 8: Creating Interactive Pages by Using HTML5 APIs
- Module 9: Adding Offline Support to Web Applications
- Module 10: Implementing an Adaptive User Interface
- Module 11: Creating Advanced Graphics
- Module 12: Animating the User Interface
- Module 13: Implementing Real-time Communication by Using Web Sockets
- Module 14: Performing Background Processing by Using Web Workers
- Module 15: Packaging JavaScript for Production Deployment





Programming in C#

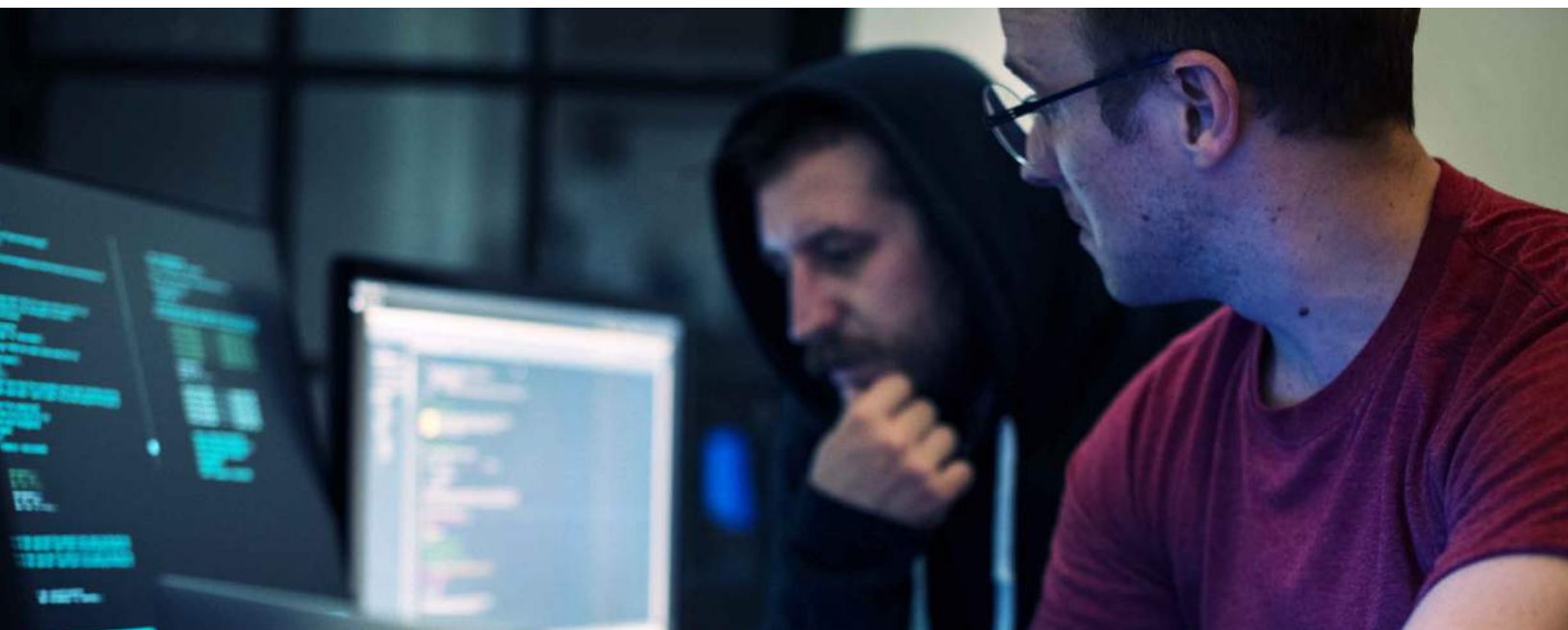
Overview

This training course teaches developers the programming skills that are required for developers to create Windows applications using the Visual C# language. During their five days in the classroom students review the basics of Visual C# program structure, language syntax, and implementation details, and then consolidate their knowledge throughout the week as they build an application that incorporates several features of the .NET Framework 4.7.



Course Objectives

- Describe the core syntax and features of Visual C#.
- Create methods, handle exceptions, and describe the monitoring requirements of large-scale applications.
- Implement the basic structure and essential elements of a typical desktop application.
- Create classes, define and implement interfaces, and create and use generic collections.
- Use inheritance to create a class hierarchy and to extend a .NET Framework class.
- Read and write data by using file input/output and streams, and serialize and deserialize data in different formats.
- Create and use an entity data model for accessing a database and use LINQ to query data.
- Access and query remote data by using the types in the System.Net namespace and WCF Data Services.
- Build a graphical user interface by using XAML.
- Improve the throughput and response time of applications by using tasks and asynchronous operations.
- Integrate unmanaged libraries and dynamic components into a Visual C# application.
- Examine the metadata of types by using reflection, create and use custom attributes, generate code at runtime, and manage assembly versions.
- Encrypt and decrypt data by using symmetric and asymmetric encryption.



Course Outline

Programming in C#

- Module 1: Review of Visual C# Syntax
- Module 2: Creating Methods, Handling Exceptions, and Monitoring Applications
- Module 3: Basic types and constructs of Visual C#
- Module 4: Creating Classes and Implementing Type-Safe Collections
- Module 5: Creating a Class Hierarchy by Using Inheritance
- Module 6: Reading and Writing Local Data
- Module 7: Accessing a Database
- Module 8: Accessing Remote Data
- Module 9: Designing the User Interface for a Graphical Application
- Module 10: Improving Application Performance and Responsiveness
- Module 11: Integrating with Unmanaged Code
- Module 12: Creating Reusable Types and Assemblies
- Module 13: Encrypting and Decrypting Data






Developing ASP.NET MVC 5 Web Applications

Overview

In this course, students will learn to develop advanced ASP.NET MVC applications using .NET Framework tools and technologies. The focus will be on coding activities that enhance the performance and scalability of a web application. ASP.NET MVC will be introduced and compared with Web Forms so that students know when each should/could be used. This course will also prepare the students for exam 70-486.



Course Objectives

- 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 and configure an application for troubleshooting.
- 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 web application.
- Build an MVC application that resists malicious attacks and persists information about users and preferences.
- Describe how to write a Microsoft 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 web application from a development computer to a web server for staging or production.

Course Outline

Developing ASP.NET MVC 5 Web Applications

- Module 1: Exploring ASP.NET MVC 5
- Module 2: Designing ASP.NET MVC 5 Web Applications
- Module 3: Developing ASP.NET MVC 5 Models
- Module 4: Developing ASP.NET MVC 5 Controllers
- Module 5: Developing ASP.NET MVC 5 Views
- Module 6: Testing and Debugging ASP.NET MVC 5 Web Applications
- Module 7: Structuring ASP.NET MVC 5 Web Applications
- Module 8: Applying Styles to ASP.NET MVC 5 Web Applications
- Module 9: Building Responsive Pages in ASP.NET MVC 5 Web Applications
- Module 10: Using JavaScript and jQuery for Responsive MVC 5 Web Applications
- Module 11: Controlling Access to ASP.NET MVC 5 Web Applications
- Module 12: Building a Resilient ASP.NET MVC 5 Web Application
- Module 13: Implementing Web APIs in ASP.NET MVC 5 Web Applications
- Module 14: Handling Requests in ASP.NET MVC 5 Web Applications
- Module 15: Deploying ASP.NET MVC 5 Web Applications



Targeted Audience

This Course Is Designed For:

This training is for professionals who want to start their career as programmer and gain expertise at implementing modern web apps. This training will help you achieve Microsoft Certified Solutions Associate (MCSA) on Web Applications



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