

Programming in HTML5 with JavaScript and CSS3 - MOC On Demand (MS-20480)

Modality: On Demand

Duration: 2 Days

SATV Value: 2

This course sets you up for the Exam pf 70-480 prompting the Certification of 70-480. This course does exclude the Official Exam Voucher, in any case, you can demand to buys the Official Exam Voucher independently.

About this course:

This course is MS Official popular course open for 90 days from the date of course demand if you have a yearly membership, or course buys separately. Course access will lapse following 90 days enlistment of the course.

This course gives a prologue to CSS3, HTML5, and JavaScript. This course assists understudies with increasing essential HTML5, CSS3, and JavaScript programming abilities. This course is a passage point into both the preparing path of Windows Store applications and the Web application. The course aims around utilizing HTML5, CSS3, and JavaScript to execute the language of programming, perform looping and branching, define and use variables, capture and validate user input, store data, develop user interfaces, and create well-structured application. In this course, the lab situations chose to help and show the structure of different scenarios of application. They are proposed to concentrate on the standards and coding structures/parts that are utilized to set up a software application of HTML5. This course utilizes Visual Studio 2017, driving on Windows 10.

The normal pay for a Front End Web Developer is **\$88,680** annually.

Course Objectives:

- Make forms of HTML5 by utilizing distinctive information types, and validate user contribution by utilizing JavaScript code and HTML5 characteristics.
- Explain the new HTML5 features, and style and make HTML5 pages.
- Add intelligence to the page of HTML5 by utilizing JavaScript.
- Style the pages of HTML5 by utilizing CSS3.
- Define how to utilize Visual Studio 2017 to make and run a Web application.
- Compose present-day JavaScript code and use babel to make it good for all browsers.
- Send and get information to and from a remote source of data by utilizing the object of XMLHttpRequest and Fetch API.
- Make Web pages of HTML5 that can adjust to various gadgets and structure factors.
- Make a very much organized and effectively viable code of JavaScript.
- Add progressed designs to the page of HTML5 by utilizing Canvas elements, and by utilizing the Scalable Vector Graphics.
- Utilize basic APIs of HTML5 in interactive Web applications.

- Make Web applications that help offline tasks.
- Increase the experience of the user by including animations to an HTML5 page.
- Web Sockets usage to send and get information between a server and a Web application.
- Develop the responsiveness of a Web application that executes big operations for utilizing the Worker process of Web.

Audience:

This course is planned for proficient engineers who have programming experience of 6-12 months and who are keen on creating applications utilizing HTML5 with CSS3 and JavaScript (either web applications or Windows Store applications for Windows 10).

Prerequisites:

- 1-month experience making Windows customer applications
- The experience of 1 – 3 months making Web applications, including composing simple JavaScript code
- 1-month of experience utilizing Visual Studio 2017

Course Outline:

Module 1: Overview of HTML and CSS

This module provides an overview of HTML and CSS, and describes how to use Visual Studio 2012 to build a Web application.

Lessons

- Overview of HTML
- Overview of CSS
- Creating a Web Application by Using Visual Studio 2012

Lab : Exploring the Contoso Conference Application

After completing this module, students will be able to:

- Describe basic HTML elements and attributes.
- Explain the structure of CSS.
- Describe the tools available in Visual Studio 2012 for building Web applications.

Module 2: Creating and Styling HTML5 Pages

This module describes the new features of HTML5, and explains how to create and style HTML5 pages.

Lessons

- Creating an HTML5 Page

- Styling an HTML5 Page

Lab : Creating and Styling HTML5 Pages

After completing this module, students will be able to:

- Create static pages using the new features available in HTML5.
- Use CSS3 to apply basic styling to the elements in an HTML5 page.

Module 3: Introduction to JavaScript

This module provides an introduction to the JavaScript language, and shows how to use JavaScript to add interactivity to HTML5 pages.

Lessons

- Overview of JavaScript Syntax
- Programming the HTML DOM with JavaScript
- Introduction to jQuery

Lab : Displaying Data and Handling Events by Using JavaScript

After completing this module, students will be able to:

- Explain the syntax of JavaScript and describe how to use JavaScript with HTML5.
- Write JavaScript code that manipulates the HTML DOM and handles events.
- Describe how to use jQuery to simplify code that uses many common JavaScript APIs.

Module 4: Creating Forms to Collect Data and Validate User Input

This module describes the new input types available with HTML5, and explains how to create forms to collect and validate user input by using the new HTML5 attributes and JavaScript code.

Lessons

- Overview of Forms and Input Types
- Validating User Input by Using HTML5 Attributes
- Validating User Input by Using JavaScript

Lab : Creating a Form and Validating User Input

After completing this module, students will be able to:

- Create forms that use the new HTML5 input types.
- Validate user input and provide feedback by using the new HTML5 attributes.
- Write JavaScript code to validate user input and provide feedback in cases where it is not suitable to use HTML5 attributes

Module 5: Communicating with a Remote Data Source

This module describes how to send and receive data to and from a remote data source by using an XMLHttpRequest object and by performing jQuery AJAX operations.

Lessons

- Sending and Receiving Data by Using XMLHttpRequest
- Sending and Receiving Data by Using jQuery AJAX operations

Lab : Communicating with a Remote Data Source

After completing this module, students will be able to:

- Serialize, deserialize, send, and receive data by using XMLHttpRequest objects.
- Simplify code that serializes, deserializes, sends, and receives data by using the jQuery ajax method

Module 6: Styling HTML5 by Using CSS3

This module describes how to style HTML5 pages and elements by using the new features available in CSS3.

Lessons

- Styling Text
- Styling Block Elements
- CSS3 Selectors
- Enhancing Graphical Effects by Using CSS3

Lab : Styling Text and Block Elements using CSS3

After completing this module, students will be able to:

- Style text elements on an HTML5 page by using CSS3.
- Apply styling to block elements by using CSS3.
- Use CSS3 selectors to specify the elements to be styled in a Web application.
- Implement graphical effects and transformations by using the new CSS3 properties.

Module 7: Creating Objects and Methods by Using JavaScript

This module explains how to write well-structured and easily-maintainable JavaScript code, and how to apply object-oriented principles to JavaScript code in a Web application.

Lessons

- Writing Well-Structured JavaScript
- Creating Custom Objects

- Extending Objects

Lab : Refining Code for Maintainability and Extensibility

After completing this module, students will be able to:

- Describe the benefits of structuring JavaScript code carefully to aid maintainability and extensibility.
- Explain best practices for creating custom objects in JavaScript.
- Describe how to extend custom and native objects to add functionality.

Module 8: Creating Interactive Pages using HTML5 APIs

This module describes how to use some common HTML5 APIs to add interactive features to a Web application. This module also explains how to debug and profile a Web application.

Lessons

- Interacting with Files
- Incorporating Multimedia
- Reacting to Browser Location and Context
- Debugging and Profiling a Web Application

Lab : Creating Interactive Pages by Using HTML5 APIs

After completing this module, students will be able to:

- Use the Drag and Drop, and the File APIs to interact with files in a Web application.
- Incorporate audio and video into a Web application.
- Detect the location of the user running a Web application by using the Geolocation API.
- Explain how to debug and profile a Web application by using the Web Timing API and the Internet Explorer Developer Tools.

Module 9: Adding Offline Support to Web Applications

This module describes how to add offline support to a Web application, to enable the application to continue functioning in a user's browser even if the browser is disconnected from the network.

Lessons

- Reading and Writing Data Locally
- Adding Offline Support by Using the Application Cache

Lab : Adding Offline Support to a Web Application

After completing this module, students will be able to:

- Save and retrieve data locally on the user's computer by using the Local Storage API.

- Provide offline support for a Web application by using the Application Cache API.

Module 10: Implementing an Adaptive User Interface

This module describes how to create HTML5 pages that can dynamically detect and adapt to different devices and form factors.

Lessons

- Supporting Multiple Form Factors
- Creating an Adaptive User Interface

Lab : Implementing an Adaptive User Interface

After completing this module, students will be able to:

- Describe the need to detect device capabilities and react to different form factors in a Web application.
- Create a Web page that can dynamically adapt its layout to match different form factors.

Module 11: Creating Advanced Graphics

This module describes how to create advanced graphics for an HTML5 Web application by using a Canvas element, and by using Scalable Vector Graphics.

Lessons

- Creating Interactive Graphics by Using Scalable Vector Graphics
- Programmatically Drawing Graphics by Using a Canvas

Lab : Creating Advanced Graphics

After completing this module, students will be able to:

- Use Scalable Vector Graphics to add interactive graphics to an application.
- Draw complex graphics on an HTML5 Canvas element by using JavaScript code.

Module 12: Animating the User Interface

This module describes how to enhance the user experience in an HTML5 Web application by adding animations.

Lessons

- Applying CSS Transitions
- Transforming Elements
- Applying CSS Key-frame Animations

Lab : Animating User Interface Elements

After completing this module, students will be able to:

- Apply CSS transitions to elements on an HTML5 page, and write JavaScript code to detect when a transition has occurred.
- Describe the different types of 2D and 3D transitions available with CSS3
- Implement complex animations by using CSS key-frames and JavaScript code.

Module 13: Implementing Real-Time Communications by Using Web Sockets

This module explains how to use Web Sockets to transmit and receive data between an HTML5 Web application and a server.

Lessons

- Introduction to Web Sockets
- Sending and Receiving Data by Using Web Sockets

Lab : Implementing Real-Time Communications by Using Web Sockets

After completing this module, students will be able to:

- Explain how Web Sockets work and describe how to send and receive data through a Web Socket.
- Use the Web Socket API with JavaScript to connect to a Web Socket server, send and receive data, and handle the different events that can occur when a message is sent or received.

Module 14: Creating a Web Worker Process

This module describes how to use Web Worker Processes to perform long-running operations asynchronously and improve the responsiveness of an HTML5 Web application.

Lessons

- Introduction to Web Workers
- Performing Asynchronous Processing by Using a Web Worker

Lab : Creating a Web Worker Process

After completing this module, students will be able to:

- Describe the purpose of a Web Worker process, and how it can be used to perform asynchronous processing as well as provide isolation for sensitive operations.
- Use the Web Worker APIs from JavaScript code to create, run, and monitor a Web Worker process.

