

# MVS3-1 - MOC 20480 - PROGRAMMING IN HTML5 WITH JAVASCRIPT AND CSS3

Categoria: **Visual Studio**

## INFORMAZIONI SUL CORSO



**Durata:**  
5 Giorni



**Categoria:**  
Visual Studio



**Qualifica Istruttore:**  
Microsoft Certified  
Trainer



**Dedicato a:**  
Sviluppatore



**Produttore:**  
Microsoft

## OBIETTIVI

After completing this course, students should be able to:

- Explain how to use Visual Studio 2017 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 Fetch API.
- Style HTML5 pages by using CSS3.
- Create well-structured and easily-maintainable JavaScript code.
- Write modern JavaScript code and use babel to make it compatible to all browsers.
- 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.
- Use WebPack to package web applications for production.

## PREREQUISITI

- 1 – 3 months experience creating Web applications, including writing simple JavaScript code
- 1 month experience creating Windows client applications
- 1 month of experience using Visual Studio 2017

## CONTENUTI

**Module 1: Overview of HTML and CSS**

- Overview of HTML
- Overview of CSS
- Creating a Web Application by Using Visual Studio 2017

#### **Lab : Exploring the Contoso Conference Application**

- Exploring the Contoso Conference Application
- Examining and Modifying the Contoso Conference Application

#### **Module 2: Creating and Styling HTML Pages**

- Creating an HTML5 Page
- Styling an HTML5 Page

#### **Lab : Creating and Styling HTML5 Pages**

- Creating HTML5 Pages
- Styling HTML pages

#### **Module 3: Introduction to JavaScript**

- Overview of JavaScript
- Introduction to the Document Object Model

#### **Lab : Displaying Data and Handling Events by Using JavaScript.**

- Displaying Data Programmatically
- Handling Events

#### **Module 4: Creating Forms to Collect and Validate User Input**

- Creating HTML5 Forms
- Validating User Input by Using HTML5 Attributes
- Validating User Input by Using JavaScript

#### **Lab : Creating a Form and Validating User Input**

- Creating a Form and Validating User Input by Using HTML5 Attributes
- Validating User Input by Using JavaScript

#### **Module 5: Communicating with a Remote Server**

- Async programming in JavaScript
- Sending and Receiving Data by Using the XMLHttpRequest Object
- Sending and Receiving Data by Using the Fetch API

#### **Lab : Communicating with a Remote Data Source**

- Retrieving Data
- Serializing and Transmitting Data
- Refactoring the Code by Using the jQuery ajax Method

#### **Module 6: Styling HTML5 by Using CSS3**

- Styling Text by Using CSS3
- Styling Block Elements
- Pseudo-Classes and Pseudo-Elements
- Enhancing Graphical Effects by Using CSS3

#### **Lab : Styling Text and Block Elements by Using CSS3**

- Styling the Navigation Bar
- Styling the Register Link
- Styling the About Page

#### **Module 7: Creating Objects and Methods by Using JavaScript**

- Writing Well-Structured JavaScript Code
- Creating Custom Objects
- Extending Objects

**Lab : Refining Code for Maintainability and Extensibility**

- Object Inheritance
- Refactoring JavaScript Code to Use Objects

**Module 8: Creating Interactive Pages by Using HTML5 APIs**

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

**Lab : Creating Interactive Pages with HTML5 APIs**

- Dragging and Dropping Images
- Incorporating Video
- Using the Geolocation API to Report the User's Current Location

**Module 9: Adding Offline Support to Web Applications**

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

**Lab : Adding Offline Support to Web Applications**

- Caching Offline Data by Using the Application Cache API
- Persisting User Data by Using the Local Storage API

**Module 10: Implementing an Adaptive User Interface**

- Supporting Multiple Form Factors
- Creating an Adaptive User Interface

**Lab : Implementing an Adaptive User Interface**

- Creating a Print-Friendly Style Sheet
- Adapting Page Layout to Fit Different Form Factors

**Module 11: Creating Advanced Graphics**

- Creating Interactive Graphics by Using SVG
- Drawing Graphics by Using the Canvas API

**Lab : Creating Advanced Graphics**

- Creating an Interactive Venue Map by Using SVG
- Creating a Speaker Badge by Using the Canvas API

**Module 12: Animating the User Interface**

- Applying CSS Transitions
- Transforming Elements
- Applying CSS Keyframe Animations

**Lab : Animating the User Interface**

- Applying CSS Transitions
- Applying Keyframe Animations

**Module 13: Implementing Real-time Communication by Using Web Sockets**

- Introduction to Web Sockets
- Using the WebSocket API

**Lab : Performing Real-time Communication by Using Web Sockets**

- Receiving Messages from a Web Socket
- Sending Messages to a Web Socket
- Handling Different Web Socket Message Types

#### **Module 14: Performing Background Processing by Using Web Workers**

- Understanding Web Workers
- Performing Asynchronous Processing by Using Web Workers

##### **Lab : Creating a Web Worker Process**

- Improving Responsiveness by Using a Web Worker

#### **Module 15: Packaging JavaScript for Production Deployment**

- Understanding Transpilers And Module bundling
- Creating Separate Packages for Cross Browser Support

##### **Lab : Setting Up Webpack Bundle for Production**

- Creating and Deploying Packages using WebPack

### **INFO**

**Materiale didattico:** Materiale didattico in formato digitale

**Costo materiale didattico:** incluso nel prezzo del corso a Calendario

**Natura del corso:** Operativo (previsti lab su PC)