

# Programming in HTML5 with JavaScript and CSS3

## **Description**

This web development training 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.

#### **Delegates will how to**

- use Visual Studio to create and run a Web application.
- 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.

### **Outline**

#### Overview of HTML and CSS

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

#### **Creating and Styling HTML5 Pages**

- Creating an HTML5 Page
- Styling an HTML5 Page

#### **Introduction to JavaScript**

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

#### **Creating Forms to Collect Data and Validate User Input**

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

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

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

#### **Styling HTML5 by Using CSS3**



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

#### Creating Objects and Methods by Using JavaScript

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

#### **Creating Interactive Pages using HTML5 APIs**

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

#### **Adding Offline Support to Web Applications**

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

#### **Implementing an Adaptive User Interface**

- Supporting Multiple Form Factors
- Creating an Adaptive User Interface

#### **Creating Advanced Graphics**

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

#### **Animating the User Interface**

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

#### **Implementing Real-Time Communications by Using Web Sockets**

Introduction to Web Sockets



• Sending and Receiving Data by Using Web Sockets

### **Creating a Web Worker Process**

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

# **Prerequisites**

There is no prerequisite