Programming in HTML5 with JavaScript and CSS3

Duration: 5 Days

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