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# Deccansoft Software Services

(A Microsoft Learning Partner)

## HTML 5 COURSE SYLLABUS

### Module 1: HTML5 Introduction

In this module you will learn about history and limitations of html5

- ❖ Limitations of HTML 4
- ❖ Introduction and Advantages of HTML 5
- ❖ First HTML5 Document
- ❖ Overview of New Features of HTML5
- ❖ List of HTML 4.01 elements removed from HTML5:

### Module 2: Page Layout Semantic Elements

In this module you will learn what semantic elements is and how to use it.

- ❖ Header
- ❖ Navigation
- ❖ Section & Articles
- ❖ Footer
- ❖ Aside and more...

### Module 3: HTML5 Web Forms

In this module you will learn about form elements like text fields, checkboxes, radio buttons, submit buttons and more.

- ❖ HTML 5 Global Attributes
- ❖ Displaying a Search Input Field
- ❖ Contact Information Input Fields
- ❖ Utilizing Date and Time Input Fields
- ❖ Number Inputs
- ❖ Selecting from a Range of Numbers
- ❖ Selecting Colors
- ❖ Creating an Editable Drop-Down
- ❖ Requiring a Form Field
- ❖ Autofocusing a Form Field
- ❖ Displaying Placeholder Text
- ❖ Disabling Autocomplete

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- ❖ Restricting Values

#### **Module 4: Canvas API**

In this module you will learn about canvas drawing paths, boxes, circles, text, and adding images.

- ❖ Overview of HTML5 Canvas
- ❖ History
- ❖ What Is a Canvas?
- ❖ Canvas Coordinates
- ❖ Registering the Canvas dimensions
- ❖ Drawing on Canvas with paths, curves etc.
- ❖ Working with Solid colors, Gradients & Transparency
- ❖ Importing External Images & Setting the background
- ❖ Working with Color & Geometrical transformations
- ❖ Creating graphs & charts
- ❖ Working with Text
- ❖ Animating a Vertical Bar-Chart
- ❖ Fine tune animation with Acceleration & Easing.
- ❖ Working with Pixel Data
- ❖ CSS and Canvas
- ❖ Create High-Res, Retina-Display-Ready Media with Canvas
- ❖ Clipping Canvas drawings & saving them to a file.
- ❖ When Not to Use Canvas
- ❖ Fallback Content
- ❖ Implementing Canvas Security
- ❖ Ensuring backward compatibility Support of Canvas API to older versions of browsers

#### **Module 5: SVG API**

In this module you will learn about svg. SVG is used to define graphics for the Web.

SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

Overview of SVG

- ❖ Understanding SVG
- ❖ Scalable Graphics
- ❖ Creating 2D Graphics with SVG
- ❖ Adding SVG to a Page
- ❖ Simple Shapes
- ❖ Transforming SVG Elements

- ❖ Reusing Content
- ❖ Patterns and Gradients
- ❖ SVG Paths
- ❖ Using SVG Text
- ❖ Putting the Scene Together
- ❖ Building an Interactive Application with SVG
- ❖ Adding the CSS Styles
- ❖ Ensuring backward compatibility Support of SVG API to older versions of browsers

### **Module 6: HTML5 Media (Video & Audio)**

In this module you will learn multimedia. Multimedia on the web is sound, music, videos, movies, and animations. The HTML5 <video> element specifies a standard way to embed a video in a web page.

- ❖ Is Flash dead?
- ❖ Adding Video & Audio to a page
- ❖ Supported Audio & Video formats
- ❖ Audio & Video codecs
- ❖ Loss & Lossless compression
- ❖ Media specific attributes Vs Global attributes
- ❖ Deployment challenges on Mobiles
- ❖ Converting Audio & Video to supported formats using open source & commercial software
- ❖ Using a Frame grabber
- ❖ Custom Controls, Seek bar, Progress bar with Javascript & CSS
- ❖ Applying CSS skins & transforms
- ❖ Working with multiple tracks, Subtitles & Captions with Captionator, Player & the Lean back Player
- ❖ Integrating Video with Canvas & SVG
- ❖ Applying Visual filters using Canvas & SVG
- ❖ Debugging, Browser support.
- ❖ Licensing issues.
- ❖ Ensuring backward compatibility Support of Media API's to older versions of browsers

### **Module 7: Web Storage API**

In this module you will learn how to use session to store data in browser and types of storages

- ❖ Goodbye cookies introducing Web Storage
- ❖ Browser Support
- ❖ Local Vs Session storage
- ❖ Using the HTML5 Web Storage API

- ❖ Setting and Retrieving Values
- ❖ Storing forms & caching events with local storage
- ❖ Storing & Accessing JSON data.
- ❖ Communicating Web Storage Updates
- ❖ Data Security
- ❖ Need more storage space - exploring Web SQL Database API & Indexed DB
- ❖ Creating a Grocery List with Web SQL DB
- ❖ Ensuring backward compatibility Support of Web Storage API to older versions of browsers

### Module 8: Geolocation

In this module you will learn about geolocation. How to find location, finding the present location etc .

- ❖ Comparing Geolocation techniques in the past & modern day Geolocation
- ❖ Understanding the pillars of Geolocation. i.e., GPS/ IP Address/ Cell IDs/ Wi-Fi and Bluetooth
- ❖ LBS (Location based services)
- ❖ Mobile & Augmented reality applications, which consume geolocation service.
- ❖ Understanding Latitude, Longitude, Speed, Course & Accuracy
- ❖ Getting you current location
- ❖ Browser compatibility & Fallbacks.
- ❖ Reverse geocoding
- ❖ Mapping location
- ❖ Getting Distance & Directions between two places.
- ❖ Following a moving location
- ❖ Combing geolocation with google maps
- ❖ Triggering the Privacy Protection Mechanism
- ❖ Saving Geographical information
- ❖ Geolocation usage – Geo Marketing, Geo social, Geo tagging, Geo social, Geo tagging & Geo applications.
- ❖ Building a Real-Time Application with HTML5 Geolocation
- ❖ Ensuring backward compatibility Support of Geolocation API to older versions of browsers

### Module 9: Web Workers

In this module you will learn about web worker. Web worker is a JavaScript running in the background, without affecting the performance of the page.

- ❖ What are web workers?
- ❖ Possibilities & Limitations of web workers

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- ❖ Inline, Dedicated & Shared Workers
- ❖ Creating a worker, Assign roles & deploying the same.
- ❖ Leveraging a Shared Worker
- ❖ Worker support in modern browsers
- ❖ Managing multiple workers
- ❖ Parsing data with workers
- ❖ Perform Heavy array computations
- ❖ Using timers in conjunction with worker
- ❖ Work with pixel manipulations
- ❖ Make twitter JSONP requests
- ❖ Connect to share workers at same time with multiple browser windows
- ❖ Transferable objects
- ❖ Debugging Your Workers
- ❖ Ensuring backward compatibility Support of Web Workers API to older versions of browsers

**Module 10: HTML5-Server Sent Events**

# CSS3

## Module 1: INTRODUCING CSS3

In this module you will learn about css3, history and features

- ❖ What CSS3 Is and How It Came to Be
- ❖ A Brief History of CSS3
- ❖ CSS3 Is Modular
- ❖ Module Status and the Recommendation Process
- ❖ CSS3 Is Not HTML5
- ❖ Let's Get Started: Introducing the Syntax
- ❖ Browser-Specific Prefixes
- ❖ Future-Proofing Experimental CSS
- ❖ Getting Started

## Module 2: BORDER AND BOX EFFECTS

In this module you will learn about how to apply borders to elements, image tags, drop shadows

- ❖ Giving Your Borders Rounded Corners
- ❖ border-radius Shorthand
- ❖ Differences in Implementation Across Browsers
- ❖ Using Images for Borders
- ❖ Multicolored Borders
- ❖ Adding Drop Shadows
- ❖ Border and Box Effects: Browser Support

## Module 3: BACKGROUND IMAGES AND OTHER DECORATIVE

Here we will learn how to set background-image and its properties to develop

- ❖ PROPERTIES
- ❖ Background Images
- ❖ Multiple Background Images
- ❖ Background Size
- ❖ Background Clip and Origin
- ❖ background-repeat
- ❖ Background Image Clipping
- ❖ Image Masks
- ❖ Background Images: Browser Support

**Module 4:2D TRANSFORMATIONS**

Here you will learn about transformation .transformation is an effect that lets an element change shape, size and position.

- ❖ The transform Property
- ❖ rotate
- ❖ Position in Document Flow
- ❖ transform-origin
- ❖ translate
- ❖ skew
- ❖ scale
- ❖ Multiple Transformations
- ❖ Transforming Elements with Matrices
- ❖ Reflections with WebKit
- ❖ 2D Transformations: Browser Support

**3D TRANSFORMATIONS**

- ❖ 3D Elements in CSS
- ❖ Transform Style
- ❖ The Transformation Functions
- ❖ Rotation Around an Axis
- ❖ Translation Along the Axis
- ❖ Scaling
- ❖ The Transformation Matrix
- ❖ Perspective
- ❖ The perspective and perspective-origin Properties
- ❖ The Transformation Origin
- ❖ Showing or Hiding the Backface
- ❖ 3D Transformations: Browser Support

**Module 5: TRANSITIONS AND ANIMATIONS**

Here you will learn how to transitions allows you to change property values smoothly (from one value to another), over a given duration like Mouse over the element etc.

- ❖ Transitions
- ❖ Property
- ❖ Duration
- ❖ Timing Function
- ❖ Delay

- ❖ Shorthand
- ❖ The Complete Transition Example
- ❖ Multiple Transitions
- ❖ Triggers
- ❖ More Complex Animations
- ❖ Key Frames
- ❖ Animation Properties
- ❖ The Complete Animations Example
- ❖ Multiple Animations
- ❖ Transitions and Animations: Browser Support

### **Module 6: CSS3-Multi Column Layout**

In this module you will learn about using css3 we can divide columns into multiple parts according to web page viewport. Let's check how to do multiple column layout

- ❖ CSS3 Multi-column Properties
- ❖ CSS3 Create Multiple Columns
- ❖ CSS3 Specify the Gap Between Columns
- ❖ CSS3 Column Rules
- ❖ How Many Columns an Element Should Span
- ❖ The Column Width
- ❖ CSS3 Multi-columns Properties

### **Module 7: MEDIA QUERIES**

Here you will learn to make responsive of web pages like mobile compatible, tablet

- ❖ The Advantages of Media Queries
- ❖ Syntax
- ❖ Media Features
- ❖ Width and Height
- ❖ Device Width and Height
- ❖ Using Media Queries in the Real World
- ❖ Orientation
- ❖ Aspect Ratio
- ❖ Pixel Ratio
- ❖ Multiple Media Features
- ❖ Mozilla-Specific Media Features
- ❖ Media Queries: Browser Support