

# Course Brochure

## Web Application Development

### Overview

- To make you ready to develop a web site / web application using the latest client side web technologies and web standards.

### Pre-requisites

- Any one programming language

### Applications

## COURSE CONTENTS

### Intro to Web App Development

- ❖ What is web / internet
- ❖ What is web site
- ❖ What is web page
- ❖ What is web browser
- ❖ What is web server
- ❖ What is web client
- ❖ What is web technology
- ❖ Client side web technologies (vs) server side web technologies

### HTML 4

- ❖ Intro to html
- ❖ Syntax of html
- ❖ Creating simple web page using html
- ❖ Intro to html elements / html tags
- ❖ <html>, <body>
- ❖ <h1>, <h2>, <h3>, <h4>, <h5>, <h6>
- ❖ <b>, <i>, <u>, <strong>, <em>, <sup>, <sub>
- ❖ <abbr>, <bdo>, <article>
- ❖ <br>, <img>, <a>
- ❖ <head>, <title>, <meta>
- ❖ <ul>, <ol>, <li>, <dl>, <dt>, <dt>
- ❖ <table>, <tr>, <td>, <th>, <caption>
- ❖ <div>, <span>
- ❖ <form>, <input>, <textarea>
- ❖ <select>, <option>, <optgroup>
- ❖ <button>, <fieldset>, <legend>, <label>
- ❖ <iframe>
- ❖ HTML Entities

### XHTML

- ❖ Intro to XHTML
- ❖ Need of XHTML
- ❖ XHTML in real web sites
- ❖ Rules-set of XHTML
- ❖ <!DOCTYPE>

### CSS 2.1

- ❖ Intro to CSS 2.1
- ❖ Need of CSS in real web sites
- ❖ Syntax of CSS
- ❖ Background properties
- ❖ Font properties
- ❖ Text properties
- ❖ Link properties
- ❖ List properties
- ❖ Box model (padding, margin, border)
- ❖ Display property
- ❖ Position property
- ❖ Overflow property
- ❖ Important CSS selectors
- ❖ Opacity
- ❖ Float
- ❖ Internal, inline, external styles

### JavaScript

- ❖ Intro to JavaScript
- ❖ Need of JavaScript in real web sites
- ❖ Variables
- ❖ Operators
- ❖ Control statements
- ❖ Dialog boxes
- ❖ User-defined functions
- ❖ DOM manipulations
- ❖ Event handling
- ❖ Click, dblclick, focus, blur
- ❖ Mouseover, mouseout, mousemove
- ❖ Keyup, keypress, change, onload
- ❖ Updating CSS using JavaScript
- ❖ Updating attributes using JavaScript
- ❖ Creating, removing elements
- ❖ Setinterval, Settimeout
- ❖ Random
- ❖ External JavaScript
- ❖ Validations using JavaScript
- ❖ String methods
- ❖ Date methods

## COURSE CONTENTS

### HTML 5

- ❖ Intro to HTML 5
- ❖ Need of HTML 5 in real web sites
- ❖ Removed elements
- ❖ Remove attributes
- ❖ <meter>, <progress>, <figure>, <figcaption>
- ❖ <details>, <summary>
- ❖ <datalist>, <output>
- ❖ New input types
- ❖ New attributes of <input> tag
- ❖ <audio>, <video>
- ❖ localStorage, sessionStorage
- ❖ <header>, <nav>, <section>, <aside>, <footer>
- ❖ Geo location
- ❖ App cache
- ❖ Web workers
- ❖ Server sent events
- ❖ Drag and drop
- ❖ Important canvas and SVG concepts

### CSS 3

- ❖ Intro to CSS 3
- ❖ rgba
- ❖ Border radius
- ❖ Box shadow, text shadow
- ❖ Word wrap
- ❖ Resize
- ❖ Multiple columns
- ❖ Transitions
- ❖ Animations
- ❖ 2D Transformations
- ❖ Gradient colors
- ❖ Font face

### Responsive Web Design

- ❖ Intro to Page Template Development
- ❖ Header, nav, leftcol, pagecontent, footer
- ❖ Intro to responsive web design
- ❖ Need of RWD in real web sites

- ❖ Extra-small, small, medium, large devices
- ❖ Media queries
- ❖ Targeting CSS file to various resolutions

### jQuery

- ❖ Intro to jQuery
- ❖ Need of jQuery in real web sites
- ❖ Advantages of jQuery
- ❖ jQuery versions
- ❖ jQuery production vs development
- ❖ Downloading jQuery
- ❖ val, html, text
- ❖ Bind and Unbind
- ❖ Click, dblclick, focus, blur, change
- ❖ Mousemove, mouseover, mouseout
- ❖ Keypress, keyup
- ❖ Disabling cut, copy, paste using jQuery
- ❖ Disabling right click using jQuery
- ❖ Filtering characters in a textbox using jQuery
- ❖ Fade in, fade out, fade to, fade toggle
- ❖ Show, hide, toggle
- ❖ Slide down, slide up, slide toggle
- ❖ jQuery chaining
- ❖ addClass, removeClass, toggleClass, hasClass, CSS
- ❖ attr, removeAttr
- ❖ jQuery animations
- ❖ jQuery animations with easing effects
- ❖ Important jQuery selectors and filters
- ❖ append, prepend, after, before
- ❖ AppendTo, prependTo, insertAfter, insertBefore, clone
- ❖ Wrap, wrapAll, empty, remove, replaceWith

### JSON

- ❖ Intro to JSON
- ❖ JSON syntax
- ❖ Need of JSON in real web sites
- ❖ JSON object
- ❖ JSON array
- ❖ Complex JSON objects
- ❖ Reading JSON objects using jQuery

## COURSE CONTENTS

### jQuery UI

- ❖ Intro to jQuery UI
- ❖ Need of jQuery UI in real web sites
- ❖ Downloading jQuery UI
- ❖ Importing jQuery UI
- ❖ Draggable
- ❖ Droppable
- ❖ Resizable
- ❖ Selectable
- ❖ Sortable
- ❖ Accordion
- ❖ Auto Complete
- ❖ Button Set
- ❖ Date Picker
- ❖ Dialog
- ❖ Menu
- ❖ Progress Bar
- ❖ Slider
- ❖ Spinner
- ❖ Tabs
- ❖ Tooltip
- ❖ Color Animation
- ❖ Easing Effects
- ❖ addClass
- ❖ removeClass
- ❖ Effects
- ❖ jQuery UI themes
- ❖ Customizing jQuery UI widgets / plug-ins
- ❖ jQuery UI with CDN
- ❖ Consuming jQuery Plug-ins from 3rd party web sites

### jQuery Validations

- ❖ Intro to jQuery validation plug-in
- ❖ Using jQuery validation plug-in
- ❖ Regular expressions

### jQuery AJAX

- ❖ Intro to AJAX
- ❖ Need of AJAX in real web sites.

- ❖ Getting database data using jQuery-AJAX
- ❖ Inserting, Updating, Deleting database data using jQuery-AJAX
- ❖ Grid Development using jQuery-AJAX

**Note:** AJAX Demos will be shown with ASP.NET

### jQuery Mobile

- ❖ Intro to jQuery Mobile
- ❖ Need of jQuery Mobile in real web sites
- ❖ Downloading jQuery Mobile
- ❖ Creating pages
- ❖ Header, content, footer
- ❖ Forms, control group
- ❖ Flip switch, slider, tabs
- ❖ Navigation and transitions
- ❖ Themes
- ❖ Buttons
- ❖ Icons
- ❖ Grid layout

### 15) Bootstrap

- ❖ Introduction to Bootstrap
- ❖ Need of Bootstrap in real web sites
- ❖ Bootstrap First Example
- ❖ Bootstrap Lead
- ❖ Bootstrap Alignment
- ❖ Bootstrap Text colors
- ❖ Bootstrap Tables
- ❖ Bootstrap Buttons
- ❖ Bootstrap Glyphicons
- ❖ Bootstrap Show
- ❖ Bootstrap Hidden
- ❖ Bootstrap Images
- ❖ Bootstrap Jumbotron
- ❖ Bootstrap Paging
- ❖ Bootstrap Panels
- ❖ Bootstrap DropDown
- ❖ Bootstrap NavBar
- ❖ Bootstrap Breadcrumbs
- ❖ Bootstrap ProgressBar
- ❖ Bootstrap Modal Plugin

## COURSE CONTENTS

- ❖ Bootstrap Tabs Plugin
- ❖ Bootstrap Carousel Plugin
- ❖ Bootstrap Grid system (Responsive Web Design)
- ❖ Bootstrap Forms

### KnockoutJS

- ❖ Intro to KnockoutJS
- ❖ Need of KnockoutJS in real web sites
- ❖ Downloading KnockoutJS
- ❖ MVVM architecture
- ❖ Creating view, view model and model
- ❖ data-bind
- ❖ Observable property
- ❖ Computed property
- ❖ Subscribe
- ❖ Working with JSON arrays

### AngularJS

- ❖ Intro to AngularJS
- ❖ Need of AngularJS in real web sites
- ❖ Downloading AngularJS
- ❖ AngularJS first example
- ❖ AngularJS built-in directives
- ❖ AngularJS expressions
- ❖ AngularJS modules
- ❖ AngularJS controllers

- ❖ AngularJS scope
- ❖ AngularJS dependency injection AngularJS bootstrapping
- ❖ AngularJS data bindings
- ❖ AngularJS \$watch
- ❖ AngularJS filters
- ❖ AngularJS events
- ❖ AngularJS AJAX
- ❖ Ng-repeat
- ❖ AngularJS with json arrays
- ❖ AngularJS registration form and login form
- ❖ AngularJS CRUD operations
- ❖ AngularJS Animations
- ❖ AngularJS validations
- ❖ AngularJS \$q
- ❖ AngularJS custom values
- ❖ AngularJS custom factories
- ❖ AngularJS custom services
- ❖ AngularJS custom directives
- ❖ AngularJS custom providers
- ❖ AngularJS Routing
- ❖ AngularUI Routing