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| **Day 1** |  |
| **Introduction**   * Client – Server architecture * Application Server, Web Server, Database Server * Web pages - Static and dynamic   **HTML**   * What is HTML? * HTML Structure * Basic HTML tags and attributes * First web page – exercise * Formatting page content * Adding lists * Adding styles to a web page * Creating links - Internal and external * Links to e-mail   **Adding Images**   * Adding an image to your page * Image formats * Making an image into a link * Aligning text with images * Adding the “alt” attribute to your image   **Page Layout**   * Logical page flow * Tables * Forms * Div * DOM * HTML DOM   **Day 2**  **Cascading style sheets**   * Why use CSS? * Styles for a page * CSS Syntax * Selector * Property * Value * The type selector * The universal selector * The descendent selector * The class selector * The ID selector * The child selector * The attribute selector * Grouping selectors * CSS Inclusion * Embedded CSS * Inline CSS * External CSS * Imported CSS @import rule * CSS Rule overriding |  |
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**Day 3**

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| **JavaScript**  **Introduction to JavaScript**   * JavaScript language fundamentals * The Flexibility of JavaScript * JavaScript as a Loosely Typed Language * Inline JS.   **Functions**   * Creating functions * Calling functions * Returning values * Anonymous Functions * Function Literal * Function Invocation Patterns * Functions as Callbacks   **Handling Events**   * Introduction to Event Handlers * Event Handlers as JavaScript Methods * Handling a Window or Frame Event * Handling Mouse Events * Handling Link Events * Handling a Form Event * Handling Key Events: onKeyPress, onKeyDown, and onKeyUp * Handling Error Events * Event bubbling * Form validation using JavaScript Regular expressions   **OOP with JavaScript**   * Understand JavaScript Object notation (JSON) * Writing function constructor * Writing class owned instance methods * Understand prototype for writing object owned instance methods * Writing class owned class methods * Understand Prototypal inheritance * Using Array Objects |  |
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**Day 4**

**Functional programming in JavaScript**

* Functions as First-Class Objects
* Closures
* High Order functions
  + Writing high order functions
  + Currying
  + Implementing Map, reduce and filter functionalities using high order functions

**Creating and Styling HTML5 Pages**

* New Features of HTML 5
* Current state of Browser support
* HTML5Shiv and Modernizr
* Creating an HTML5 Page
  + Using new HTML 5 structural tags
    - Section, article, nav, header and footer
* Styling an HTML5 Page using CSS

## **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

**Creating Interactive Pages using HTML5 APIs**

* Interacting with Files
* Incorporating Multimedia
* History API
* 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

**Creating Advanced Graphics**

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

**Day 5**

## **Styling HTML5 by Using CSS3**

* CSS3 Modules
* Layout Engine Support
* BOX Model
* Styling Text
* Styling Block Elements
* CSS3 Selectors
* Enhancing Graphical Effects by Using CSS3

Mobile first approach Using CSS3

* Media queries
* Multicolumn approach

## **JQuery**

* Selecting and Manipulating DOM Elements with jQuery
  + Using CSS Selectors
  + Basic CSS Selectors
  + Hierarchical Selectors
  + Attribute Selectors
  + Adding jQuery Filters to Your Selectors
* Manipulating the Document Object Model (DOM) for Cross-Browser DHTML
* Leveraging the .ready() method
* Adding and replacing content with jQuery
* Updating, adding and deleting element content
* Inserting nodes into the DOM and manipulating parents and siblings
* Dynamically assigning CSS properties
* Adding and removing CSS rules and classes
* Controlling element size and position
* jQuery and Ajax
* The load() Method
* Basic Ajax Requests with $.get() and $.post()
* $.getJSON() and $.getScript()
* Exercising Complete Control with $.ajax()
* Global Ajax Events
* Ajax Helper Methods