

Course Code	TAPL1LF016
Course Name	Front-end Development (HTML, HTML 5, CSS, JavaScript, XML and JQuery)

Duration (in days)	5	Proficiency Level	Fundamental
Pre-requisites	<ul style="list-style-type: none"> C Programming Object Oriented Concepts 	Target Audience	Campus Hires

Learning Outcome

Upon successful completion of this course, participants will be able to

- Work with HTML tags, create web pages and link them
- Work with HTML5 new elements
- Change the look and feel of a webpage using Cascading Style Sheets (CSS)
- Do HTML5 styling with CSS and manage User experience across multiple browsers
- Use JavaScript objects for creating dynamic web pages and write scripts to process forms
- Appreciate the need for XML documents and create them
- Validate XML documents with DTD and XSD
- Transform XML documents to HTML with XSLT
- Manipulate DOM with JQuery

Day-wise Session Plan

Day	Unit	Objectives	Hours
1	HTML Fundamentals	HTML <ul style="list-style-type: none"> • HTML documents • Using doctype • The head element • Using <head> • The body element • Using id and class attributes HTML Text <ul style="list-style-type: none"> • Headings • Block and Inline Elements • Whitespace • Additional Text Elements HTML Lists <ul style="list-style-type: none"> • List Types • Creating Lists • List Rendering HTML Links <ul style="list-style-type: none"> • Link concepts • Linking Documents • Understanding Targets • Linking to Targets • Additional Link Attributes HTML Tables <ul style="list-style-type: none"> • Table Elements 	2

		<ul style="list-style-type: none"> • Structuring a Table • Table Data • Spanning Columns and Rows • Formatting Tables • Table Formatting HTML Images and Objects <ul style="list-style-type: none"> • Image and Object Concepts • Adding Images • Adding Objects 	
	HTML Forms	HTML forms fundamentals <ul style="list-style-type: none"> • Form Basics • Form Settings HTML form inputs <ul style="list-style-type: none"> • Text inputs • Selections • Input attributes • Input commands Organizing HTML forms <ul style="list-style-type: none"> • Labels • Fieldsets • Tab index • Access keys HTML form scenarios <ul style="list-style-type: none"> • Scripting forms • Handling multiple forms • Uploading files 	2
	HTML5 Fundamentals	What's new in HTML5 <ul style="list-style-type: none"> • What is HTML5? • New HTML5 Elements • New JavaScript APIs • When is HTML5 Fully Compliant With All Browsers • Markup Example Before and After HTML5 • Detecting HTML5 Features Semantic HTML <ul style="list-style-type: none"> • What Is Semantic HTML? • Auditing a Site for Semantic Issues • Auditing Our Project for Semanticism • Sectioning and Grouping Elements • Semantics and Screen Readers • Main Flow Content • Marking up Main Flow Content • Headings and Implicit Sections • Creating Our Outline Using Headings • HTML Outlines • Outlines in HTML4 vs. HTML5 • Finishing up Our Outline • Text-level Semantic Elements • Semantic Forms • Final Remarks on Semanticism DOM Selection <ul style="list-style-type: none"> • Selection Basics • Features of Selection API Forms <ul style="list-style-type: none"> • New Input Types? • New Input Types: Markup Review 	4

		<ul style="list-style-type: none"> • New Input Types: In Different Browsers • to Native Validation • Working with Pseudo Classes • Exposing Custom Validation Messages: Part 1 • Native Validation Rules • Exposing Custom Validation Messages: Part 2 • Custom Validation Rules • Bootstrap Validation Module: Demo and Markup • Bootstrap Validation Module: JavaScript 	
2	HTML5 Styling with CSS3	HTML5 Design <ul style="list-style-type: none"> • XHTML vs. HTML5 • Building with HTML5 • HTML5 Audio & Video • HTML5 Video Captions • HTML5 & Geolocation Styling With CSS3 <ul style="list-style-type: none"> • Overview of CSS • Adding CSS3 and How • Fonts • Colors • Shadowing • Rounded Corners • Gradients • Transforms • Form Inputs • CSS3 Color & Opacity • CSS3 Text: Selection & Columns • CSS3 Text: @font-face & Shadows • CSS3 Images • CSS3 Effects • Advanced CSS3 Animations CSS3 Walkthrough <ul style="list-style-type: none"> • How We Solve Problems • Exercise: Build an American Flag • Flag: Layout • Flag: Resets • Flag: Data Attributes and Stripes • Flag: Stars • Flag: Wrap-up User Experience Across Multiple Browsers <ul style="list-style-type: none"> • Challenges with Browsers • Fallbacks • Feature Detection • Usage Scenario 	8
3	Java Script Programming	Introduction to JavaScript <ul style="list-style-type: none"> • JavaScript variables, operators and programming constructs • Functions and Objects • Event Handling using JavaScript • Working with DOM • Form validations using DOM 	8
4	Introduction to XML	<ul style="list-style-type: none"> • Introduction to XML • Explain how XML documents are structured 	8

	Validation of XML Documents	<ul style="list-style-type: none"> • Element, attribute, and entity declarations in DTDs • Validate XML documents with DTD • Different schema constructs • Validate XML documents with XSDs • Concept of Namespaces 	
5	jQuery	JQuery <ul style="list-style-type: none"> • Overview of JQuery • Downloading JQuery or using from CDN • Use of \$() function • Don't jump the gun – use of \$(document).ready() function DOM manipulation with JQuery <ul style="list-style-type: none"> • Use of selectors in JQuery • DOM traversal and manipulation • Using Element, Class and ID Selectors with jQuery • Modifying the Content and Styles of Selected Elements • Adding and Removing Elements Using jQuery • Adding JQuery UI plugins <ol style="list-style-type: none"> 1. Datepicker 2. Slider 3. Accordion 4. Tabs • Binding events to elements 	8
		Total	40