



Module
Presenter's Manual
for
**Building Next
Generation Web Sites**

***Effective from: March 2017
Ver. 1.0***



Amendment Record

Version No.	Effective Date	Change	Replaced Pages
1.0	March 2017	New	-

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1. Introduction

At the end of this course, students will be able to:

- Explain the evolution of HTML
- Explain the page structure used by HTML
- List the drawbacks in HTML 4 and XHTML
- List the new features of HTML5
- Explain CSS and JavaScript
- Explain jQuery
- Explain browser support for HTML5
- Explain the elements constituting an HTML tag
- Describe doctype
- Explain the basic tags in HTML
- Describe container and standalone tags
- Explain the role of HTML5 in Mobile devices
- Explain the Heading tag
- Explain the different tags related to formatting
- Explain monospaced font, preformatted text, and block quotation
- Describe the different types of lists
- Explain the procedure to change the background color and image
- Describe hyperlinks
- Explain how to hyperlink to a Web page and e-mail address
- Explain how to hyperlink to anchors and other content
- Identify the new functions of CSS3
- Explain the different types of selectors
- Explain nested tags
- Define Classes and IDs for applying styles
- Explain the process to apply styles to hyperlink
- List and explain text and font styles
- Explain paragraph indentation and application of border
- Explain horizontal paragraph alignment
- Explain vertical spacing within a paragraph
- Explain graphic formatting in Web pages
- Explain graphic insertion, sizing, and padding
- Explain CSS3 Animation
- Describe the use of CSS3 on Mobile devices
- Explain HTML 5 semantic tags
- Explain HTML 5 semantic tag layouts
- Explain the usage of navigation bar
- Describe a text-based and graphical navigation bar
- Explain image mapping
- Explain divisions in HTML5
- Describe the creating and formatting tables
- Explain the table size and the width of a column
- Describe the table formatting and merging of table cells
- Explain the page layout for tables
- Describe HTML5 forms
- Explain the working of new input types in HTML5
- Explain the new Form attributes and elements
- Describe the need for multimedia in HTML5
- Explain the audio elements in HTML5

- Explain the video elements in HTML5
- Explain the accessibility of audio and video elements
- Describe how to deal with Non-supporting browsers
- Explain scripting
- Describe the various versions of JavaScript language
- Explain the client-side and server-side JavaScript
- Describe the <script>tag
- List the variables and data types in JavaScript
- Describe the JavaScript methods to display information
- Explain escape sequences.
- List the built in functions in JavaScript
- Explain events and event handling
- Explain jQuery
- Describe how to use the jQuery Mobile
- Explain operators and their types in JavaScript
- Explain regular expressions in JavaScript
- Explain decision-making statements in JavaScript
- Explain loops
- Explain break and continue statement
- Explain single-dimensional arrays
- Explain multi-dimensional arrays
- Explain functions
- Explain return statement
- Describe objects
- Explain different browser objects
- Describe Document Object Model (DOM)
- Describe the features of different mobile devices
- List the different type of platforms available for mobile devices
- Explain the design aspects of a mobile Web site
- Explain the architectural aspects of a mobile Web site
- Explain the requirements for developing and testing of a mobile Web site
- Explain support of HTML5 in mobile Web site
- List the best practices for optimizing a mobile Web site
- Describe Canvas in HTML5
- Explain the procedure to draw lines
- Explain the procedure to use color and transparency
- Explain the procedure to work with various drawing objects
- Describe working with images and text
- Describe the procedure to create Web page events with JavaScript and jQuery
- Describe the process of including external content in Web pages
- Explain Web Storage in HTML5
- Explain Session Storage
- Explain Local Storage
- Explain the Indexed DB API
- Describe a native app
- Explain the difference between native apps and HTML5 apps
- Describe the advantages of native and HTML5 apps
- List the steps to convert HTML5 apps to native apps
- List and explain text and font styles
- Describe inline spans
- Explain paragraph indentation and application of border
- Explain horizontal paragraph alignment
- Explain vertical spacing within a paragraph

2. Information on Session Allocation

Module	Theory (No. of Hours)	Lab (No. of Hours)	Total (No. of Hours)
HTML5	20	20	40

Throughout this Presenter's Manual, the module **Building Next Generation Web Sites** will be referred to as **HTML5**.


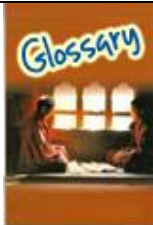



3. Module Deliverables available on OnlineVarsity






To aid the learning process, following are the deliverables

Student Deliverables:

1. Learner's Guide (eBook)

Resources available on OnlineVarsity for Students:

Icons	Feature - Description/Functionality
	Download Book - Student has the option to download the subject related e-book and read offline.
	Glossary - Student can access a list of subject related specialized words with their definitions.
	FAQ - Student can access frequently asked questions and their answers.
	Show Me How - Student can view a step-wise simulation/demonstration of the module related topics.
	Practice 4 Me - Student can test and evaluate their understanding of module related topics.

	Work Assignments - Student can solve scenario based lab assignments (Hands-on). The faculty will evaluate and give their feedbacks.
	Download Source code/Files – Student can download courseware related source files.
	References - Student can access additional subject related material for reading.
	Feedback - Student can provide feedback on the course material.
	Ask to Learn – Student can submit subject related technical queries. Queries submitted will be directed to the particular course coordinator/head.

4. Week-wise Session Schedule

- A Session has duration of 2 hours

➤ Week-Wise Schedule

Week	Day 1	Day 2	Day 3	Day 4
1	Session 1 HTML5 – T1	Session 2 HTML5 – L1	Session 3 HTML5 – T2	Session 4 HTML5 – L2
2	Session 5 HTML5 – T3	Session 6 HTML5 – L3	Session 7 HTML5 – T4	Session 8 HTML5 – L4
3	Session 9 HTML5 – T5	Session 10 HTML5 – L5	Session 11 HTML5 – T6	Session 12 HTML5 – L6
4	Session 13 HTML5 – T7	Session 14 HTML5 – L7	Session 15 HTML5 – T8	Session 16 HTML5 – L8
5	Session 17 HTML5 – T9	Session 18 HTML5 – L9	Session 19 HTML5 – T10	Session 20 HTML5 – L10

HTML5: Building Next Generation Web Sites

T: Theory Session

L: Lab Session

5. Session Coverage

Session No.	Session Title	Session Details	Deliverables' Mapping
1	HTML5 – T1	<p>All the topics as listed below from Session 1 and Session 2 of <i>HTML5 – NexTGen Web</i> book should be covered in this session.</p> <p><u>Session 1 – Introduction to the Web</u></p> <ul style="list-style-type: none"> ➤ Explain the evolution of HTML ➤ Explain the page structure used by HTML ➤ List the drawbacks in HTML 4 and XHTML ➤ List the new features of HTML5 ➤ Explain CSS ➤ Explain JavaScript ➤ Explain jQuery ➤ Explain browser support for HTML5 <p><u>Session 2 – Introduction to HTML5</u></p> <ul style="list-style-type: none"> ➤ Explain the elements constituting an HTML tag ➤ Describe doctype ➤ Explain the basic tags in HTML ➤ List the different data types, attributes, and entities of HTML5 ➤ Describe container and standalone tags ➤ Explain the role of HTML5 in Mobile devices 	<p>HTML5 – NexTGen Web</p> <p>SG – Session 1 & 2 XP – Session 1 & 2 TG – Session 1 & 2</p>
2	HTML5 – L1	<p>All the Workshop topics from Session 1 and Session 2 of <i>HTML5 – NexTGen Web</i> course should be covered in this session.</p>	<p>HTML5 – NexTGen Web (OnlineVarsity)</p> <p>Session 1 Session 2</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
3	HTML5 – T2	<p>All the topics as listed below from Session 3 and Session 4 of <i>HTML5 – NexTGen Web</i> book should be covered in this session.</p> <p><u>Session 3 – Formatting Text Using Tags</u></p> <ul style="list-style-type: none"> ➤ Explain the Heading tag ➤ Explain the different tags related to formatting ➤ Explain monospaced font, preformatted text, and block quotation ➤ Describe the different types of lists ➤ Explain the procedure to change the background color and image <p><u>Session 4 – Creating Hyperlinks and Anchors</u></p> <ul style="list-style-type: none"> ➤ Describe hyperlinks ➤ Explain absolute and relative paths ➤ Explain how to hyperlink to a Web page and e-mail address ➤ Explain how to hyperlink to anchors and other content 	<p>HTML5 – NexTGen Web</p> <p>SG – Session 3 & 4 XP – Session 3 & 4 TG – Session 3 & 4</p>
4	HTML5 – L2	<p>All the Workshop topics from Session 3 and Session 4 of <i>HTML5 – NexTGen Web</i> course should be covered in this session.</p>	<p>HTML5 – NexTGen Web (OnlineVarsity)</p> <p>Session 3 Session 4</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
5	HTML5 – T3	<p>All the topics as listed below from Session 5 and Session 6 of <i>HTML5 – NexTGen Web</i> book should be covered in this session.</p> <p><u>Session 5 – INTRODUCTION TO CSS3</u></p> <ul style="list-style-type: none"> ➤ Identify the new functions of CSS3 ➤ Explain the different types of selectors ➤ Explain nested tags ➤ Define Classes and IDs for applying styles ➤ Explain the process to apply styles to hyperlink <p><u>Session 6 – Formatting using Style Sheets</u></p> <ul style="list-style-type: none"> ➤ List and explain text and font styles ➤ Describe inline spans ➤ Explain paragraph indentation and application of border ➤ Explain horizontal paragraph alignment ➤ Explain vertical spacing within a paragraph 	<p>HTML5 – NexTGen Web</p> <p>SG – Session 5 & 6 XP – Session 5 & 6 TG – Session 5 & 6</p>
6	HTML5 – L3	<p>All the Workshop topics from Session 5 and Session 6 of <i>HTML5 – NexTGen Web</i> course should be covered in this session.</p>	<p>HTML5 – NexTGen Web (OnlineVarsity)</p> <p>Session 5 Session 6</p>
7	HTML5 – T4	<p>All the topics as listed below from Session 7 and Session 8 of <i>HTML5 – NexTGen Web</i> book should be covered in this session.</p> <p><u>Session 7 – DISPLAYING GRAPHICS AND CSS3 ANIMATION</u></p> <ul style="list-style-type: none"> ➤ Explain graphic formatting in Web pages ➤ Explain graphic insertion, sizing, and padding ➤ Explain CSS3 Animation 	<p>HTML5 – NexTGen Web</p> <p>SG – Session 7 & 8 XP – Session 7 & 8 TG – Session 7 & 8</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
		<ul style="list-style-type: none"> ➤ Describe the use of CSS3 on Mobile devices <p><u>Session 8 – CREATING NAVIGATIONAL AIDS AND DIVISION-BASED LAYOUT</u></p> <ul style="list-style-type: none"> ➤ Explain HTML 5 semantic tags ➤ Explain HTML 5 semantic tag layouts ➤ Explain the usage of navigation bar ➤ Describe a text-based and graphical navigation bar ➤ Explain image mapping ➤ Explain divisions in HTML 5 	
8	HTML5 – L4	All the Workshop topics from Session 7 and Session 8 of <i>HTML5 – NextGen Web</i> course should be covered in this session.	<p>HTML5 – NextGen Web (OnlineVarsity)</p> <p>Session 7 Session 8</p>
9	HTML5 – T5	<p>All the topics as listed below from Session 9 and Session 10 of <i>HTML5 – NextGen Web</i> book should be covered in this session.</p> <p><u>Session 9 – CREATING TABLES</u></p> <ul style="list-style-type: none"> ➤ Describe the creating and formatting tables ➤ Explain the table size and the width of a column ➤ Describe the table formatting and merging of table cells ➤ Explain the page layout for tables <p><u>Session 10 – HTML FORMS</u></p> <ul style="list-style-type: none"> ➤ Describe HTML5 forms ➤ Explain the working of new input types in HTML5 ➤ Explain the new Form attributes ➤ Explain the new Form elements 	<p>HTML5 – NextGen Web</p> <p>SG – Session 9 & 10 XP – Session 9 & 10 TG – Session 9 & 10</p>
10	HTML5 – L5	All the Workshop topics from Session 9 and Session 10 of <i>HTML5 – NextGen Web</i> course should be covered in this session.	<p>HTML5 – NextGen Web (OnlineVarsity)</p> <p>Session 9</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
			Session 10
11	HTML5 – T6	<p>All the topics as listed below from Session 11 and Session 12 of <i>HTML5 – NexTGen Web</i> book should be covered in this session.</p> <p><u>Session 11 – HTML5 AUDIO AND VIDEO</u></p> <ul style="list-style-type: none"> ➤ Describe the need for multimedia in HTML5 ➤ List the supported media types in HTML5 ➤ Explain the audio elements in HTML5 ➤ Explain the video elements in HTML5 ➤ Explain the accessibility of audio and video elements ➤ Describe how to deal with Non-supporting browsers <p><u>Session 12 – INTRODUCTION TO JAVASCRIPT</u></p> <ul style="list-style-type: none"> ➤ Explain scripting ➤ Explain the JavaScript language ➤ Describe the various versions of JavaScript language ➤ Explain the client-side and server-side JavaScript ➤ Describe the <script>tag ➤ List the variables and data types in JavaScript ➤ Describe the JavaScript methods to display information ➤ Explain escape sequences. ➤ List the built in functions in JavaScript ➤ Explain events and event handling ➤ Explain jQuery ➤ Describe how to use the jQuery Mobile 	<p>HTML5 – NexTGen Web</p> <p>SG – Session 11 & 12 XP – Session 11 & 12 TG – Session 11 & 12</p>
12	HTML5 – L6	<p>All the Workshop topics from Session 11 and Session 12 of <i>HTML5 – NexTGen Web</i> course should be covered in this session.</p>	<p>HTML5 – NexTGen Web (OnlineVarsity)</p> <p>Session 11 Session 12</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
13	HTML5 – T7	<p>All the topics as listed below from Session 13 and Session 14 of <i>HTML5 – NextGen Web</i> book should be covered in this session.</p> <p><u>Session 13 – Operators and Statements</u></p> <ul style="list-style-type: none"> ➤ Explain operators and their types in JavaScript ➤ Explain regular expressions in JavaScript ➤ Explain decision-making statements in JavaScript <p><u>Session 14 – Loops and Arrays</u></p> <ul style="list-style-type: none"> ➤ Explain while loop ➤ Explain for loop ➤ Explain do..while loop ➤ Explain break and continue statement ➤ Explain single-dimensional arrays ➤ Explain multi-dimensional arrays ➤ Explain for..in loop 	<p>HTML5 – NextGen Web</p> <p>SG – Session 13 & 14 XP – Session 13 & 14 TG – Session 13 & 14</p>
14	HTML5 – L7	<p>All the Workshop topics from Session 13 and Session 14 of <i>HTML5 – NextGen Web</i> course should be covered in this session.</p>	<p>HTML5 – NextGen Web (OnlineVarsity)</p> <p>Session 13 Session 14</p>
15	HTML5 – T8	<p>All the topics as listed below from Session 15 of <i>HTML5 – NextGen Web</i> book should be covered in this session.</p> <p><u>Session 15 – Functions and Objects</u></p> <ul style="list-style-type: none"> ➤ Explain functions ➤ Explain parameterized functions ➤ Explain return statement ➤ Describe objects ➤ Explain different browser objects ➤ Describe Document Object 	<p>HTML5 – NextGen Web</p> <p>SG – Session 15 XP – Session 15 TG – Session 15</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
		Model (DOM)	
16	HTML5 – L8	All the Workshop topics from Session 15 of <i>HTML5 – NextGen Web</i> course should be covered in this session.	HTML5 – NextGen Web (OnlineVarsity) Session 15
17	HTML5 – T9	<p>All the topics as listed below from Session 16 and Session 17 of <i>HTML5 – NextGen Web</i> book should be covered in this session.</p> <p><u>Session 16 – Building a Mobile Web Application</u></p> <ul style="list-style-type: none"> ➤ Describe the features of different mobile devices ➤ List the different type of platforms available for mobile devices ➤ Explain the design aspects of a mobile Web site ➤ Explain the architectural aspects of a mobile Web site ➤ Explain the requirements for developing and testing of a mobile Web site ➤ Explain support of HTML5 in mobile Web site ➤ List the best practices for optimizing a mobile Web site <p><u>Session 17 – CANVAS AND JAVASCRIPT</u></p> <ul style="list-style-type: none"> ➤ Describe Canvas in HTML5 ➤ Explain the procedure to draw lines ➤ Explain the procedure to use color and transparency ➤ Explain the procedure to work with various drawing objects ➤ Describe working with images and text ➤ Describe the procedure to create Web page events with JavaScript and jQuery ➤ Describe the process of including external content in Web pages 	<p>HTML5 – NextGen Web</p> <p>SG – Session 16 & 17 XP – Session 16 & 17 TG – Session 16 & 17</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
18	HTML5 – L9	All the Workshop topics from Session 16 and Session 17 of <i>HTML5 – NexTGen Web</i> course should be covered in this session.	HTML5 – NexTGen Web (OnlineVarsity) Session 16 Session 17
19	HTML5 – T10	<p>All the topics as listed below from Session 18 and Session 19 of <i>HTML5 – NexTGen Web</i> book should be covered in this session.</p> <p><u>Session 18 – HTML5 Web Storage</u></p> <ul style="list-style-type: none"> ➤ Explain Web Storage in HTML5 ➤ Explain Session Storage ➤ Explain Local Storage ➤ Explain the Indexed DB API ➤ Describe a native app ➤ Explain the difference between native apps and HTML5 apps ➤ Describe the advantages of native and HTML5 apps ➤ List the steps to convert HTML5 apps to native apps <p><u>Session 19 – HTML5 Geolocation and APIs</u></p> <ul style="list-style-type: none"> ➤ Explain the Geolocation API ➤ Explain the Google Maps API ➤ Describe the Drag and Drop API ➤ Explain the Application Cache API 	<p>HTML5 – NexTGen Web</p> <p>SG – Session 18 & 19 XP – Session 18 & 19 TG – Session 18 & 19</p>
20	HTML5 – L10	All the Workshop topics from Session 18 and Session 19 of <i>HTML5 – NexTGen Web</i> course should be covered in this session.	HTML5 – NexTGen Web (OnlineVarsity) Session 18 Session 19

5. Library References

➤	HTML5: Up and Running by Mark Pilgrim
➤	Introducing HTML5 (Voices That Matter) by Bruce Lawson
➤	Head First HTML5 Programming: Building Web Apps with JavaScript by Eric Freeman, Elisabeth Robson

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