Module
Presenter's Manual
For

HTML5, CSS, and JavaScript

Effective from: October 2020
Ver. 1.0

Amendment Record

Version No.	Effective Date	Change	Replaced Pages
1.0	October 2020	New	-

Table of Contents

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	Online (No. of Hours)
HTML5	40

Throughout this Presenter's Manual, the module **HTML5, CSS, and JavaScript** will be referred to as **HTML5**.

3. Week-wise Session Schedule

- **A Session is of 2 hours duration.**

➢ **Week-Wise Schedule**

Week	Day 1	Day 2	Day 3	Day 4
1	**Session 1 HTML5 – TL1**	**Session 2 HTML5 – TL2**	**Session 3 HTML5 – TL3**	**Session 4 HTML5 – TL4**
2	**Session 5 HTML5 – TL5**	**Session 6 HTML5 – TL6**	**Session 7 HTML5 – TL7**	**Session 8 HTML5 – TL8**
3	**Session 9 HTML5 – TL9**	**Session 10 HTML5 – TL10**	**Session 11 HTML5 – TL11**	**Session 12 HTML5 – TL12**
4	**Session 13 HTML5 – TL13**	**Session 14 HTML5 – TL14**	**Session 15 HTML5 – TL15**	**Session 16 HTML5 – TL16**
5	**Session 17 HTML5 – TL17**	**Session 18 HTML5 – TL18**	**Session 19 HTML5 – TL19**	**Session 20 HTML5 – TL20**

HTML5: HTML5, CSS, and JavaScript
TL: Online Session

To aid the learning process, following are the deliverables

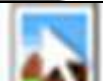(*Faculties can access eBooks and other components in Onlinevarsity through Aptrack.*)

Student Deliverables:

Resources available on Onlinevarsity:

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.
	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. Session Coverage

Session No.	Session Title	Session Details	Deliverables' Mapping
1	**HTML5 – TL1**	All the topics as listed below from Session 1 and Session 2 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 1 – Introduction to the Web** ➢ 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 **Session 2 – Introduction to HTML5** ➢ 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 **Session 3 – Formatting Text Using Tags** ➢ 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	**Building Responsive Websites with HTML5** SG – Session 1, 2,3 & 4 TG – Session 1, 2,3 & 4

Session No.	Session Title	Session Details	Deliverables' Mapping
		Session 4 – Creating Hyperlinks and Anchors ➢ 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	
2	**HTML5 – TL2**	All the Workshop topics from Session 1 to Session 4 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 1,2,3,& 4
3	**HTML5 – TL3**	All the topics as listed below from Session 5 and Session 6 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 5 – INTRODUCTION TO CSS3** ➢ 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 **Session 6 – Formatting using Style Sheets** ➢ 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	**Building Responsive Websites with HTML5** SG – Session 5 & 6 TG – Session 5 & 6
4	**HTML5 – TL4**	All the Workshop topics from Session 5 and Session 6 of *Building Responsive Websites with HTML5* course should be covered in this	**Building Responsive Websites with HTML5 (OnlineVarsity)**

Session No.	Session Title	Session Details	Deliverables' Mapping
		session.	Session 5 & 6
5	**HTML5 – TL5**	All the topics as listed below from Session 7 and Session 8 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 7 – Displaying Graphics And CSS3 Animation** ➢ Explain graphic formatting in Web pages ➢ Explain graphic insertion, sizing, and padding ➢ Explain CSS3 Animation ➢ Describe the use of CSS3 on Mobile devices **Session 8 – Creating Navigational Aids And Division-Based Layout** ➢ 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	**Building Responsive Websites with HTML5** SG – Session 7 & 8 TG – Session 7 & 8
6	**HTML5 – TL6**	All the Workshop topics from Session 7 and Session 8 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 7 & 8
7	**HTML5 – TL7**	All the topics as listed below from Session 9 and Session 10 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 9 – Creating Tables** ➢ Describe the creating and formatting tables ➢ Explain the table size and the	**Building Responsive Websites with HTML5** SG – Session 9 & 10 TG – Session 9 & 10

Session No.	Session Title	Session Details	Deliverables' Mapping
		width of a column ➢ Describe the table formatting and merging of table cells ➢ Explain the page layout for tables **Session 10 – HTML Forms** ➢ Describe HTML5 forms ➢ Explain the working of new input types in HTML5 ➢ Explain the new Form attributes ➢ Explain the new Form elements	
8	**HTML5-TL8**	All the Workshop topics from Session 9 and Session 10 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 9 & 10
9	**HTML5 – TL9**	All the topics as listed below from Session 11 and Session 12 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 11 – HTML5 AUDIO and VIDEO** ➢ 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 **Session 12 – Introduction To JavaScript** ➢ 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	**Building Responsive Websites with HTML5** SG – Session 11 & 12 TG – Session 11 & 12

Session No.	Session Title	Session Details	Deliverables' Mapping
		➢ 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	
10	HTML5 – TL10	All the topics as listed below from Session 13 and Session 14 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 13 – Basics of jQuery** ➢ Explain the basics of jQuery and its usage with Bootstrap ➢ Outline selectors and functions in jQuery ➢ Describe JSON and its usage in jQuery ➢ Explain conversions to JSON ➢ Describe the concept of event delegation and its usage in jQuery **Session 14 – Functions, Widgets, and Plugins in jQuery** ➢ Describe various types of functions in jQuery ➢ Explain use of AJAX in jQuery ➢ Elucidate the callback concept in jQuery ➢ Describe implementation and use of various controls such as widgets and datatables in jQuery	**Building Responsive Websites with HTML5** SG – Session 13 & 14 TG – Session 13 & 14
11	HTML5 – TL11	All the topics as listed below from Session 15 and Session 16 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 15 – Operators and Statements**	**Building Responsive Websites with HTML5** SG – Session 15 & 16 TG – Session 15 & 16

Session No.	Session Title	Session Details	Deliverables' Mapping
		➢ Explain operators and their types in JavaScript ➢ Explain regular expressions in JavaScript ➢ Explain decision-making statements in JavaScript **Session 16 – Loops and Arrays** ➢ 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	
12	**HTML5 – TL12**	All the Workshop topics from Session 13 to Session 16 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 13 to 16
13	**HTML5 – TL13**	All the topics as listed below from Session 17 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 17 – Functions and Objects** ➢ Explain functions ➢ Explain parameterized functions ➢ Explain return statement ➢ Describe objects ➢ Explain different browser objects ➢ Describe Document Object Model (DOM)	**Building Responsive Websites with HTML5** SG – Session 17 TG – Session 17
14	**HTML5 – TL14**	All the Workshop topics from Session 17 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 17
15	**HTML5 – TL15**	All the topics as listed below from Session 18 of *Building Responsive Websites with HTML5* book should	**Building Responsive Websites with HTML5**

Session No.	Session Title	Session Details	Deliverables' Mapping
		be covered in this session. **Session 18 – Building a Mobile Web Application** ➢ 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	SG - Session 18 TG - Session 18
16	**HTML5 – TL16**	All the Workshop topics from Session 18 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 18
17	**HTML5 – TL17**	All the topics as listed below from Session 19 of *Building Responsive Websites with HTML5* book should be covered in this session. **Session 19 – Canvas And JavaScript** ➢ 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	**Building Responsive Websites with HTML5** SG – Session 19 TG – Session 19

Session No.	Session Title	Session Details	Deliverables' Mapping
18	**HTML5 – TL18**	All the Workshop topics from Session 19 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 19
19	**HTML5 – TL19**	All the topics as listed below from Session 20 and Session 21 of *Building Responsive Websites with HTML5* book should be covered in this session. **<u>Session 20 – HTML5 Web Storage</u>** ➢ 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 **<u>Session 21 – HTML5 Geolocation and APIs</u>** ➢ Explain the Geolocation API ➢ Explain the Google Maps API ➢ Describe the Drag and Drop API ➢ Explain the Application Cache API	**Building Responsive Websites with HTML5** SG – Session 20 & 21 TG – Session 20 & 21
20	**HTML5 – TL20**	All the Workshop topics from Session 20 and 21 of *Building Responsive Websites with HTML5* course should be covered in this session.	**Building Responsive Websites with HTML5 (OnlineVarsity)** Session 20 & 21

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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