

WEB DEVELOPMENT LAB – 2022-23 SYLLABUS

S.No	Title																																					
1	Chapter One: HTML																																					
	https://bit.ly/PVP20-WT-HTML																																					
	1.1	Introduction WWW,URL,HTTP,HTTPS,FTP,MIME																																				
	1.2	Basic Web Technologies																																				
	1.3	Why HTML																																				
	1.4	What is HTML																																				
	1.5	HTML Page Structure																																				
	1.6	HTML Elements Categories																																				
		1.6.1	Conatainer Elements																																			
		1.6.2	Empty Elements																																			
		1.6.3	HTML Block and Inline Elements																																			
	1.7	HTML Element Attributes,Comments																																				
	1.8	Meta tag In HTML																																				
	1.9	Sectioning Elements																																				
		1.9.1	Semantic and Non-semantic Elements																																			
		1.9.2	Header,footer,main,nav,section,article,aside,address																																			
	1.10	Grouping Elements in HTML																																				
		1.10.1	Paragraph Element																																			
		1.10.2	Division Element (Div ,Span)																																			
		1.10.3	List Element (1. Unordered List 2. Ordered List 3. Description List)																																			
		1.10.4	Quotation and Citation Element (blockquote,q,abbr,address,cite, and bdo)																																			
	1.11	Link Element (<a>.....)																																				
	1.12	<u>HTML Formatting Elements or Text-level semantic elements</u> 1. - Bold text 2. - Important text 3. <i> - Italic text 4. - Emphasized text 5. <mark> - Marked text 6. <small> - Smaller text 7. - Deleted text 8. <ins> - Inserted text 9. <sub> - Subscript text 10. <sup> - Superscript text																																				
	1.13	<u>HTML Entities or character entities</u> <table><tr><th>Character</th><th>Description</th><th>Entity Name</th><th>Entity Number</th></tr><tr><td></td><td>Non-breaking space</td><td>&nbsp;</td><td>&#160;</td></tr><tr><td><</td><td>Less than</td><td>&lt;</td><td>&#60;</td></tr><tr><td>></td><td>Greater than</td><td>&gt;</td><td>&#62;</td></tr><tr><td>&</td><td>Ampersand</td><td>&amp;</td><td>&#38;</td></tr><tr><td>©</td><td>Copyright</td><td>&copy;</td><td>&#169;</td></tr><tr><td>€</td><td>Euro</td><td>&euro;</td><td>&#8364;</td></tr><tr><td>£</td><td>Pound</td><td>&pound;</td><td>&#163;</td></tr><tr><td>®</td><td>Registered trademark</td><td>&reg;</td><td>&#174;</td></tr></table>		Character	Description	Entity Name	Entity Number		Non-breaking space	 	 	<	Less than	<	<	>	Greater than	>	>	&	Ampersand	&	&	©	Copyright	©	©	€	Euro	€	€	£	Pound	£	£	®	Registered trademark	®
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©	Copyright	©	©																																			
€	Euro	€	€																																			
£	Pound	£	£																																			
®	Registered trademark	®	®																																			
1.14	HTML Global Attributes accesskey,class,contenteditable,data*,dir,draggable,hidden,id,lang,spellcheck,style,tabindex,title,translate																																					
1.15	HTML Table Element																																					

WEB DEVELOPMENT LAB – 2022-23 SYLLABUS

	1.16	HTML Forms	
		1.16.1	HTML Form Attributes Accept-charset,action,autocomplete, enctype,method,name,novalidate,rel,target
		1.16.2	Form Elements: <input> <label> <select> <textarea> <button> <fieldset> <legend> <datalist> <output> <option> <optgroup>
		1.16.3	HTML Input Type and value attribute <input type="button"> <input type="checkbox"> <input type="color"> <input type="date"> <input type="datetime-local"> <input type="email"> <input type="file"> <input type="hidden"> <input type="image"> <input type="month"> <input type="number"> <input type="password"> <input type="radio"> <input type="range"> <input type="reset"> <input type="search"> <input type="submit"> <input type="tel"> <input type="text"> <input type="time"> <input type="url"> <input type="week">
	1.17	Embedded elements	
		17.1	Image Element
		17.2	Audio Element
		17.3	Video Element
		17.4	iFrame Element
2	Chapter Two: CSS		
	https://bit.ly/PVP20-WT-CSS		
	2.1	Introduction to CSS	
		2.1.1	Why CSS ?
		2.1.2	What is CSS
		2.1.3	How to Write CSS Style Rules
		2.1.4	Use of Developer Tools
	2.2	Selectors	
		2.2.1	Why Selectors
		2.2.2	What are Selectors
		2.2.3	Additional CSS Selectors
		2.2.4	Element and contextual Selectors
		2.2.5	Class Selectors
		2.2.6	Attribute Selectors
		2.2.7	Pseudo classes

WEB DEVELOPMENT LAB – 2022-23 SYLLABUS

	2.3	Cascading Order	
		2.3.1	Introduction To Cascading Order
		2.3.2	Cascading order
		2.3.3	Selectors precedence and Specificity
		2.3.4	Inheritance and Important keyword.
	2.4	Typography	
		2.4.1	Why Typography?
		2.4.2	What is Typography?
		2.4.3	CSS Units
		2.4.4	Color property
		2.4.5	Background property
		2.4.6	Text properties
		2.4.7	Font properties.
	2.5	Box Model	
		2.5.1	Why Box Model?
		2.5.2	What Box Model?
		2.5.3	Width and height properties
		2.5.4	Border and border-radius property
		2.5.5	Padding property
		2.5.6	Margin Property
		2.6.7	Box-sizing property.
	2.6	Layouts	
		2.6.1	Why Layouts?
		2.6.2	What are Layouts?
		2.6.3	Float property
		2.6.4	Position properties
		2.6.5	Flex property
		2.6.6	Grid property
	2.7	Responsive Web Design	
		2.7.1	Why Responsive Web Design?
		2.7.2	What is Responsive Web Design?
		2.7.3	Flexible images and Fluid layouts
		2.7.4	Media Queries
	2.8	Adding Awesome Effects	
		2.8.1	Why Transitions and Animations
		2.8.2	What are Transformations and Transitions ?
		2.8.3	What are Animations?
		2.8.4	Transformations and Transitions
		2.8.5	Animations.
	2.9	CSS Security	
	2.10	CSS Accessibility and Best Practices	

WEB DEVELOPMENT LAB – 2022-23 SYLLABUS

3	Chapter Three: Bootstrap5	
	https://bit.ly/PVP20-WT-BOOTSTRAP	
	3.1	Bootstrap – Introduction
		3.1.1 Bootstrap – Why do we need it?
		3.1.2 Bootstrap 4 vs Bootstrap 5
		3.1.3 Getting Started with Bootstrap
		3.1.4 What are Bootstrap Reboot, Utilities
	3.2	Page Layout
		3.2.1 Intro to Page Layout Classes
		3.2.2 Grid System
		3.2.3 Containers
		3.2.4 Rows and Columns
		3.2.5 Responsive Columns
		3.2.6 Offset and Gutter
	3.3	Content Styling
		3.3.1 Content Components - Introduction
		3.3.2 Classes for Text Size
		3.3.3 Classes for Text Alignment
		3.3.4 Text Emphasis Classes
		3.3.5 Blockquote Classes
		3.3.6 List Styling
		3.3.7 Buttons in Bootstrap
		3.3.8 Spinners in Buttons
		3.3.9 Data Collapse
		3.3.10 Badges in Bootstrap
		3.3.11 Bootstrap Icons
		3.3.12 Accordion
		3.3.13 Alert
		3.3.14 Modals
		3.3.15 Tabs
		3.3.16 Responsive Images
	3.4	Content Structuring
		3.4.1 Table - Basic Styling
		3.4.2 Hoverable, Bordered Tables
		3.4.3 Cards – Introduction
		3.4.4 Cards – Structure
		3.4.5 Cards – Images
	3.5	Navigation
		3.5.1 Introduction to Navbar
		3.5.2 Navbar - Getting Started
		3.5.3 Navbar Customization
		3.5.4 Navbar Elements
		3.5.5 Responsive Navbar
	3.6	Form
		3.6.1 Forms w/o bootstrap
		3.6.2 Basic Form
		3.6.3 Form elements with Form-control - Tryout
		3.6.4 Form elements with form-group - Tryout
		3.6.5 Input groups in form
		3.6.6 Form Layouts
		3.6.7 Forms in Navbar

WEB DEVELOPMENT LAB – 2022-23 SYLLABUS

4	Chapter Four: Java Script	
	https://bit.ly/PVP20-WT-JAVASCRIPT	
	4.1	Introduction To Java Script
		4.1.1 Why we need JavaScript?
		4.1.2 What is JavaScript?
	4.2	Identifiers
		4.2.1 Working with Identifiers
		4.2.2 Type of Identifiers
	4.3	Data Types
		4.3.1 Working with Data Types
		4.3.2 Primitive Data Types
		4.3.3 Non-Primitive Data Types
	4.4	Operators
		4.4.1 Working With Operators
		4.4.2 Operators and Types of Operators
	4.5	Statements and Expressions
		4.5.1 Working with Statements and Expressions
		4.5.2 Types of Statements
		4.5.3 Non - Conditional Statements
		4.5.4 Types of Conditional Statements
		4.5.5 If Statement
		4.5.6 Switch Statement
	4.6	Loops
		4.6.1 Working With Loops
		4.6.2 Types of Loops
		4.6.3 For Loop
		4.6.4 While Loop
		4.6.5 Do-While Loop
	4.7	Functions
		4.7.1 Working with Functions
		4.7.2 Types of Functions
		4.7.3 Declaring and Invoking Function
		4.7.4 Arrow Function
		4.7.5 Function Parameters
		4.7.6 Nested Function
		4.7.7 Built-in Functions
		4.7.8 Variable Scope in Functions
	4.8	Classes
		4.8.1 Working With Classes
		4.8.2 Creating and Inheriting Classes
	4.9	Event Handling
		4.9.1 Working With Events
		4.9.2 In-built Events and Handlers
		4.9.3 Wiring the Events
		4.9.4 Exception Handling

WEB DEVELOPMENT LAB – 2022-23 SYLLABUS

	4.10	Objects	
		4.10.1	Working with Objects
		4.10.2	Types of Objects
		4.10.3	Creating Objects
		4.10.4	Combining and cloning Objects using Spread operator
		4.10.5	Destructuring Objects
		4.10.6	Accessing Object Properties
		4.10.7	Built-In Global Objects
		4.10.8	Browser Object Model
		4.10.9	Document Object Model
	4.11	Iterables	
		4.11.1	Working with Arrays
		4.11.2	Creating Arrays
		4.11.3	Combining and cloning Arrays using Spread operator
		4.11.4	Destructuring Arrays
		4.11.5	Accessing Arrays
		4.11.6	Array Methods
	4.12	Asynchronous Programming	
		4.12.1	Introduction to Asynchronous Programming
		4.12.2	Callbacks
		4.12.3	Promises
		4.12.4	Async and Await
		4.12.5	Executing Network Requests using Fetch API
	4.13	Modular Programming	
		4.13.1	Introduction to Modular Programming
		4.13.2	Creating Modules
		4.13.3	Consuming Modules
	4.14	JavaScript - Security	
		4.14.1	Why JavaScript Security?
		4.14.2	What is JavaScript Security?
		4.14.3	Security challenges in JavaScript
		4.14.4	Cross-site scripting (XSS)
		4.14.5	Demo : XSS Attack
		4.14.6	XSS Mitigation Techniques
		4.14.7	Cross-Site Request Forgery
		4.14.8	CSRF Mitigation Techniques
		4.14.9	JavaScript Obfuscation
		4.14.10	Cross Domain Request in JavaScript