

**PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY**  
 (Autonomous)  
 Kanuru, Vijayawada-520007

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)**

**II B. Tech – II Semester CSE (DATA SCIENCE)**

**Full Stack Development –I**

<b>Course Code</b>	23SA8453	<b>Year</b>	II	<b>Semester</b>	II
<b>Course Category</b>	SOC	<b>Branch</b>	CSE (Data Science)	<b>Course Type</b>	Practical
<b>Credits</b>	2	<b>L-T-P</b>	0-1-2	<b>Prerequisites</b>	Java Programming
<b>Continuous Internal Evaluation</b>	30	<b>Semester End Examination</b>	70	<b>Total Marks</b>	100

<b>Course Outcomes</b>		
Upon successful completion of the course, the student will be able to		
<b>CO1</b>	Demonstrate experimental procedures through oral communication and submit comprehensive documentation reports.	<b>L2</b>
<b>CO2</b>	Apply Full Stack Web Development (HTML, CSS, JavaScript) technologies for developing Web Applications using different tools.	<b>L3</b>
<b>CO3</b>	Analyze different Full Stack Web Development technologies by implementing them in different Web Applications.	<b>L4</b>
<b>CO4</b>	Design and evaluate a Web Application to analyze the outputs of different web Applications.	<b>L5</b>

<b>Contribution of Course Outcomes towards achievement of Program Outcomes &amp; Strength of correlation</b> (3: High,2: Moderate,1: Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>CO1</b>	2									2				
<b>CO2</b>	3				3							2		
<b>CO3</b>		3										2		
<b>CO4</b>				3								2		

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<b>Syllabus</b>		
<b>Expt No.</b>	<b>Contents</b>	<b>Mapped CO</b>
<b>1</b>	<p><b>Lists, Links and Images</b></p> <p>a. Write a HTML program, to explain the working of lists.  <b>Note:</b> It should have an ordered list, unordered list, nested lists and ordered list in an unordered list and definition lists.</p> <p>b. Write a HTML program, to explain the working of hyperlinks using &lt;a&gt; tag and href, target Attributes.</p> <p>c. Write a HTML program, that has your image and your friend’s image with specific height and width. Also, when clicked on the images it should navigate to their respective profiles.</p> <p>d. Write a HTML program, in such a way that, rather than placing large images on a page, the preferred technique is to use thumbnails by setting the height and width parameters to something like to 100*100 pixels Each thumbnail image is also a link to a full-sized version of the image. Create an image gallery using this technique</p>	CO1 to CO4
<b>2</b>	<p><b>HTML Tables, Forms and Frames</b> Write a HTML program, to explain the working of tables. (Use tags: &lt;table&gt;, &lt;tr&gt;, &lt;th&gt;, &lt;td&gt; and attributes: border, rowspan, colspan).</p> <p>a. Write a HTML program, to explain the working of tables by preparing a timetable. (Note: Use &lt;caption&gt; tag to set the caption to the table &amp; also use cell spacing, cell padding, border, rowspan, colspan etc.).</p> <p>b. Write a HTML program, to explain in the working of forms by designing Registration form. (Note: Include text field, password field, number field, date of birth field, checkboxes, radio buttons, list boxes using &lt;select&gt; &amp; &lt;option&gt; tags, &lt;text area&gt; and two buttons i.e.: submit and reset. Use tables to provide a better view).</p> <p>c. Write a HTML program, to explain the working of frames, such that page is to be divided into 3 parts on either direction. (Note: first frame image, second frame paragraph, third frame hyperlink. And also make sure of using “no frame” attribute such that frames to be fixed).</p>	CO1 to CO4
<b>3</b>	<p><b>HTML 5 and Cascading Style Sheets, Types of CSS</b></p> <p>a. Write a HTML program, that makes use of &lt;article&gt;, &lt;aside&gt;, &lt;figure&gt;, &lt;figcaption&gt;, &lt;footer&gt;, &lt;header&gt;, &lt;main&gt;, &lt;nav&gt;, &lt;section&gt;, &lt;div&gt;, &lt;span&gt; tags.</p>	CO1 to CO4

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	<p><b>b.</b> Write a HTML program, to embed audio and video into HTML web page.</p> <p><b>c.</b> Write a program to apply different types (or levels of styles or style specification formats) – inline, internal, external styles to HTML elements. (Identify selector, property and value).</p>	
<b>4</b>	<p><b>Selector forms</b></p> <p>Write a program to apply different types of selector forms</p> <p><b>a.</b> Simple selector (element, id, class, group, universal)  <b>b.</b> Combinator selector (descendant, child, adjacent sibling, general sibling)  <b>c.</b> Pseudo-class selector  <b>d.</b> Pseudo-element selector  <b>e.</b> Attribute selector</p>	CO1 to CO4
<b>5</b>	<p><b>CSS with Color, Background, Font, Text and CSS Box Model</b></p> <p><b>a.</b> Write a program to demonstrate the various ways you can reference a color in CSS.</p> <p><b>b.</b> Write a CSS rule that places a background image halfway down the page, tilting it horizontally. The image should remain in place when the user scrolls up or down.</p> <p><b>c.</b> Write a program using the following terms related to CSS font and text: font size, font-weight, font-style, text-decoration, text-transformation, text-alignment.</p> <p><b>d.</b> Write a program, to explain the importance of CSS Box model using: Content, Border, Margin, Padding.</p>	CO1 to CO4
<b>6</b>	<p><b>Applying JavaScript – Internal and External, I/O, Type Conversions</b></p> <p><b>a.</b> Create a web page with navigation bar with different menus.</p> <p><b>b.</b> Add Login menu to the navigation bar where the Login page have to opened as Modal.</p> <p><b>c.</b> Create a carousel with slides, controls, indicators and captions.</p>	CO1 to CO4
<b>7</b>	<p><b>JavaScript Pre-defined and User-defined Objects</b></p> <p><b>i.</b> Create a webpage which uses prompt dialogue box to ask a voter for his name and age. Display the information in table format along with either the voter can vote or not</p> <p><b>ii.</b> Write a program using document object properties and methods.</p> <p><b>iii.</b> Write a program using window object properties and methods.</p> <p><b>iv.</b> Write a program using array object properties and methods.</p>	CO1 to CO4

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	<ul style="list-style-type: none"> <li>v. Write a program using math object properties and methods.</li> <li>vi. Write a program using string object properties and methods.</li> <li>vii. Write a program using regex object properties and methods.</li> <li>viii. Write a program using date object properties and methods.</li> <li>ix. Write a program to explain user-defined object by using properties, methods, accessors, constructors and display.</li> </ul>	
<b>8</b>	<p><b>JavaScript Conditional Statements and Loops</b></p> <p>Write a program which asks numbers from the user and outputs HTML text that displays the larger number followed by the words “LARGER NUMBER” in an information message dialog. If the numbers are equal, output HTML text as “EQUAL NUMBERS”.</p> <ul style="list-style-type: none"> <li>ii. Write a program to display week days using switch case.</li> <li>iii. Write a program to print 1 to 10 numbers using for, while and do loops.</li> <li>iv. Write a program to print data in object using for loops</li> <li>v. Develop a program to determine whether a ‘ARMSTRONG NUMBER’ or not. [E.g.: 153 is an Armstrong number, since sum of the cube of the digits is equal to the number i.e., <math>1^3 + 5^3 + 3^3 = 153</math>]</li> <li>vi. f. Write a program to display the denomination of the amount deposited in the bank in terms of 100's, 50's, 20's, 10's, 5's, 2's &amp; 1's. (Eg: If deposited amount is Rs.163, the output should be 1-100's, 1-50's, 1- 10's, 1-2's &amp; 1-1's)</li> </ul>	CO1 to CO4
<b>9</b>	<p><b>JavaScript Functions and Events</b></p> <p><b>a.</b> Design an appropriate function should be called to display</p> <ul style="list-style-type: none"> <li>i. Factorial of that number</li> <li>ii. Fibonacci series up to that number</li> <li>iii. Prime numbers up to that number</li> <li>iv. Is it palindrome or not</li> </ul> <p><b>b.</b> Design a HTML having a text box and four buttons named Factorial, Fibonacci, Prime, and Palindrome. When a button is pressed an appropriate function should be called to display</p> <ul style="list-style-type: none"> <li>i. Factorial of that number</li> <li>ii. Fibonacci series up to that number</li> <li>iii. Prime numbers up</li> <li>iv. Is it palindrome or not</li> </ul> <p><b>c.</b> Write a program to validate the following fields in a registration page</p> <ul style="list-style-type: none"> <li>i. Name (start with alphabet and followed by alphanumeric and the</li> <li>ii. length should not be less than 6 characters)</li> <li>iii. Mobile (only numbers and length 10 digits)</li> <li>iv. E-mail (should contain format like <u>xxxxxxx@xxxxxx.xXX</u></li> </ul>	CO1 to CO4

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<b>10</b>	<b>Capstone Project:</b> Design an E-Commerce Website.	CO1 to CO4
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<b>Learning Resources</b>
<b>Text Books</b>
<ol style="list-style-type: none"><li>1. Programming the World Wide Web, Robert W. Sebesta, Eighth Edition, 2020, Pearson.</li><li>2. Web Programming with HTML5, CSS and JavaScript, John Dean, Jones &amp; Bartlett Learning, 2019 (Chapters 1-11).</li></ol>
<b>e- Resources &amp; other digital material</b>
<ol style="list-style-type: none"><li>1. <b>HTML:</b> <a href="https://www.w3schools.com/html">https://www.w3schools.com/html</a></li><li>2. <b>CSS:</b> <a href="https://www.w3schools.com/css">https://www.w3schools.com/css</a></li><li>3. <b>JavaScript:</b> <a href="https://www.w3schools.com/js/">https://www.w3schools.com/js/</a></li></ol>