

FULL STACK DEVELOPMENT – 1

Course Code	23SA8453	Year	II	Semester	II
Course Category	SOC	Branch	CSE	Course Type	Practical
Credits	2	L – T – P	0-1-2	Prerequisites	Java
Continuous Evaluation:	--	Semester End Evaluation:	50	Total Marks:	50

Course Outcomes		
Upon successful completion of the course, the student will be able to:		
CO1	Apply the basics of HTML, CSS, Bootstrap and JS to develop web applications	L2
CO2	Implement a project as an individual or team member	L3
CO3	Develop an effective report based on project implemented	L3
CO4	Apply technical knowledge for a given problem and express with an effective oral communication	L3
CO5	Analyze outputs of web-based applications	L4

List of Experiments		
Expr. No	Experiment	Mapped CO
1	Lists, Links and Images <ol style="list-style-type: none"> Write a HTML program, to explain the working of lists. Note: It should have an ordered list, unordered list, nested lists and ordered list in an unordered list and definition lists. Write a HTML program, to explain the working of hyperlinks using <a> tag and href, target Attributes. Create a HTML document that has your image and your friend's image with a specific height and width. Also when clicked on the images it should navigate to their respective profiles. 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 	CO1,CO2,CO3, CO4,CO5
2	HTML Tables, Forms and Frames <ol style="list-style-type: none"> Write a HTML program, to explain the working of tables. (use tags: <table>, <tr>, <th>, <td> and attributes: border, rowspan, colspan) 	CO1,CO2,CO3, CO4,CO5

	<p>b. Write a HTML program, to explain the working of tables by preparing a timetable. (Note: Use <caption> tag to set the caption to the table & also use cell spacing, cell padding, border, rowspan, colspan etc.).</p> <p>c. Write a HTML program, to explain 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 <select>&<option> tags, <text area> and two buttons ie: submit and reset. Use tables to provide a better view).</p> <p>d. 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>	
3	<p>HTML 5 and CSS 3, Types of CSS</p> <p>a. Write a HTML program, that makes use of <article>, <aside>, <figure>, <figcaption>, <footer>, <header>, <main>, <nav>, <section>, <div>, tags.</p> <p>b. Write a HTML program, to embed audio and video into HTML web page.</p> <p>c. 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>	CO1,CO2,CO3, CO4,CO5
4	<p>Selector forms</p> <p>a. Write a program to apply different types of selector forms</p> <ol style="list-style-type: none"> Simple selector (element, id, class, group, universal) Combinator selector (descendant, child, adjacent sibling, general sibling) Pseudo-class selector Pseudo-element selector Attribute selector 	CO1, CO2, CO3, CO4, CO5
5	<p>CSS with Color, Background, Font, Text and CSS Box Model</p> <p>a. Write a program to demonstrate the various ways you can reference a color in CSS.</p> <p>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>c. Write a program using the following terms related to CSS font and text:</p>	CO1,CO2,CO3, CO4,CO5

	i. font-size ii. font-weight iii. font-style iv. text-decoration v. text-transformation vi. text-alignment d. Write a program, to explain the importance of the CSS Box model using i. Content ii. Border iii. Margin iv. Padding	
6	Bootstrap with Navbar, Modal, Carousel a. Create a web page with navigation bar with different menus. b. Add Login menu to the navigation bar where the Login page have to opened as Modal. c. Create a carousel with slides, controls, indicators and captions.	CO1, CO2,CO3, CO4,CO5
7	Java Script I/O, Pre-defined and User-defined Objects a. 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 b. Write a program using document object properties and methods. c. Write a program using window object properties and methods. d. Write a program using array object properties and methods. e. Write a program using math object properties and methods. f. Write a program using string object properties and methods. g. Write a program using regex object properties and methods. h. Write a program using date object properties and methods. i. Write a program to explain user-defined object by using properties, methods, accessors, constructors and display.	CO1,CO2,CO3, CO4,CO5
8	Java Script Conditional Statements and Loops a. Write a program which asks the user to enter three integers, obtains the 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". b. Write a program to display week days using switch case. c. Write a program to print 1 to 10 numbers using for, while and do-while loops. d. Write a program to print data in object using for-in, for-each and for-of loops e. Develop a program to determine whether a given number is an 'ARMSTRONG NUMBER' or not. [Eg: 153 is an Armstrong number, since sum of the cube of the digits is equal to the number i.e., $13 + 53 + 33 = 153$] 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,	CO1,CO2,CO3, CO4,CO5

	2's & 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 & 1-1's)	
9	Java Script Functions and Events a. Design a appropriate function should be called to display <ul style="list-style-type: none"> i. Factorial of that number ii. Fibonacci series up to that number iii. Prime numbers up to that number iv. Is it palindrome or not 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 <ul style="list-style-type: none"> i. Factorial of that number ii. Fibonacci series up to that number iii. Prime numbers up to that number iv. Is it palindrome or not c. Write a program to validate the following fields in a registration page <ul style="list-style-type: none"> i. Name (start with alphabet and followed by alphanumeric and the length should not be less than 6 characters) ii. Mobile (only numbers and length 10 digits) iii. E-mail (should contain format like xxxxxxx@xxxxxx.xxx) 	CO1,CO2,CO3, CO4,CO5
10	CAPSTONE PROJECT: Build front-end of the web applications based on the choice of student/faculty	CO1,CO2,CO3, CO4,CO5

Learning Resources	
Text Books	
1. Programming the World Wide Web, 7th Edition, Robert W Sebesta, Pearson, 2013. 2. Web Programming with HTML5, CSS and JavaScript, John Dean, Jones & Bartlett Learning, 2019 (Chapters 1-11).	
Reference Books	
1. Html 5 Black Book, Covers Css 3, Javascript, Xml, Xhtml, Ajax, Php And JQuery, 2ed by Kogent Learning Solutions Inc., Dreamtech Press, ISBN-10: 935119907X 2. HTML & CSS: THE COMPLETE REFERENCE by Thomas Powell, McGraw Hill Education, ISBN-10: 780070701946	
E-Resources & other digital material	
1. https://www.w3schools.com/html 2. https://www.w3schools.com/css 3. https://www.w3schools.com/js/ 4. https://www.w3schools.com/nodejs	