	ITER, SIKSHA 'O' ANUSANDHAN (Deemed to be University)	Lab Assignment

Branch	**Computer Application**	Programme	**MCA**
Course Name	**Full Stack Web Development 1**	Semester	**I**
Course Code	**CA3117**	Academic Year	**2025/Odd**

Assignment- 6	**Topic: Making Web Pages Interactive with JavaScript**	**GP - 2**

Learning Level (LL)	**L1**: Remembering	**L3**: Application	**L5**: Evaluation
	L2: Understanding	**L4**: Analysis	**L6**: Creation

Q's	Questions	COs	LL
1	Explain the differences between **substring()**, **substr()**, and **slice()** in JavaScript strings, and illustrate each method with appropriate examples.	**CO4**	**L4**

2	Write a JS Program to demonstrate the functionality of all the following methods, applied with Array & also attach the Output:
	  a. push()
	  b. pop()
	  c. shift()
	  d. unshift()
	  e. splice()
	  f. reverse()
	  g. sort()
		CO4	**L6**

3	Design a **DOM Tree** for the following HTML code:
	
	``html
	<html>
	    <head>
	        <meta charset="ISO-8859-1">
	        <title>Insert title here</title>
	    </head>
	    <body>
	         Hello IWT Class
	
	            All Students are there
	
	    </body>
	</html>
	``
		CO4	**L6**

4	Write a JS Program to demonstrate the functionality of all of the following DOM methods & some JavaScript properties (used along with these methods), to manipulate HTML documents & also attach the Output:
	  a. getElementById()
	  b. getElementsByClassName()
	  c. getElementsByTagName()
	  d. innerHTML
	  e. innerText
		CO4	**L6**

5	Write a JS Program to demonstrate the functionality of the following DOM methods i.e., work as *CSS Selectors*, manipulate HTML documents & also attach the Output: **a. querySelector()** **b. querySelectorAll()**	**CO4**	**L6**

7	Design a Login Page with <form> tag & implement **Validation** with the help of **Traditional Method**. If valid, then redirect to another HTML page with an alert message i.e. "*Successfully Login*" and, if not, then throw the specific alert message & focus the text cursor to that input box. (**Attach the Output**)	**CO3**	**L6**
8	Design a Login Page with <form> tag & implement **Validation** with the help of **Regular Expression (RegEx)**. If valid, then redirect to another HTML page with an alert message i.e. "*Successfully Login*" and, if not, then throw the specific alert message & focus the text cursor to that input box. (**Attach the Output**) ⭕ The Username should consist of **Alpha-Numeric** form like at least 1 Uppercase, 1 Lowercase & 1 Number. (Ex: *AbcXyz123*) ⭕ The Password should consist of **Alpha-Numeric** with **Special Symbol** like at least 1 Uppercase, 1 Lowercase, 1 Number & 1 Special Character. (Ex: *XyAb@12#*)	**CO3**	**L6**
9	Design a Login Page with <form> tag & apply JavaScript to show or hide the Password by using the *eye* or *eye-slash* icon, whenever you will click on it. (**Attach the Output**) Use the following CSS file to apply the above-mentioned icon: <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font awesome/4.7.0/css/font-awesome.min.css">	**CO3**	**L6**
10	Design a Registration Page with <form> tag & apply JavaScript to preview the file (i.e. .jpg, .png, .jpeg, .pdf, .doc, etc) selected by yourself for Final Submission or Uploading purposes. Whenever you will click on the "*preview*" button, the selected file will be shown in a particular section of the webpage. (**Attach the Output**)	**CO3**	**L6**
6	Write a JS Program to demonstrate the functionality of all of the following DOM methods i.e., used along with **document** object, to manipulate HTML document & also attach the Output: a. **createElement()** b. **appendChild()**	**CO4**	**L6**

Note:

1. Assignment carries a weightage of **20 marks out of 100 2.**

Course outcome CO4 was covered.

	CO1	Explain fundamental concepts of web development, including client–server interaction, software stacks, and developer tools.
	CO2	Create structured web pages using HTML elements, attributes, forms, links, tables, and multimedia.
	CO3	Apply CSS for styling and layout, utilizing selectors, positioning, flexbox, and grid systems to design visually appealing pages.
Course Outcomes	CO4	Develop interactive and dynamic web pages using JavaScript, DOM manipulation, events, and Web APIs.
	CO5	Demonstrate best practices in accessibility, responsive design, and performance by applying standards, testing tools, and assistive technologies.
	CO6	Build modern frontend applications by integrating CSS preprocessors, React-based single-page applications, and cross-platform mobile development using React Native.