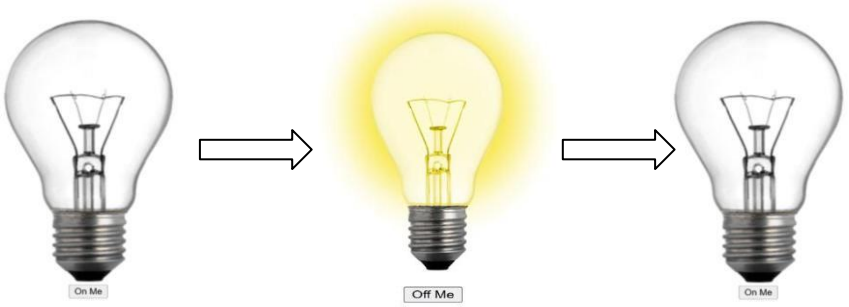
	ITER, SIKSHA 'O' ANUSANDHAN (Deemed to be University)		Theory Assignment
Branch	**Computer Application**	Programme	**MCA**
Course Name	**Full Stack Web Development 1**	Semester	**I**
Course Code	**CA3117**	Academic Year	**2025/Odd**
Assignment- 8	**Topics: Implementing Single-Page Applications with React**		**GP - 2**

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

Q's	Questions	COs	LL
1	Create a React application that contains two functional components: `StudentList` and `Student`. • The `StudentList` component should store an array of student objects (name, roll number, department). • Pass each student object as **props** to the `Student` component and display the data. • Apply simple CSS styling to each student card.	**CO6**	**L6**
2	Develop a React component named `Counter` using the **useState()** hook. • The app must contain **Increment**, **Decrement**, and **Reset** buttons. • Display the current count on the screen. • Ensure the counter never goes below zero.	**CO6**	**L6**
3	Build a React component that displays a message: *"Welcome to React!"* • Add a button that toggles the visibility of this message when clicked. • Use state and event handling in functional components.	**CO6**	**L6**
4	Create a React component that displays a list of **5 programming languages** using the `.map()` function. • Each item should have a unique **key**. • Add a button that allows users to add a new language to the list through an input field.	**CO6**	**L6**
5	Develop a React Application that toggles a light bulb **on** and **off** using a ***double-click event***. The program should produce the output as shown below. 	**CO6**	**L6**

6	Develop a simple **registration form** in React with fields: **Name**, **Email**, and **Password**. • Use `useState` to manage form data. • Validate that no field is left empty before submission. Display the submitted data below the form.	**CO6**	**L6**

Note:

1. Assignment carries a weightage of **20 marks out of 100**
2. Course outcome CO6 was covered.

Course Outcomes	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.
	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.