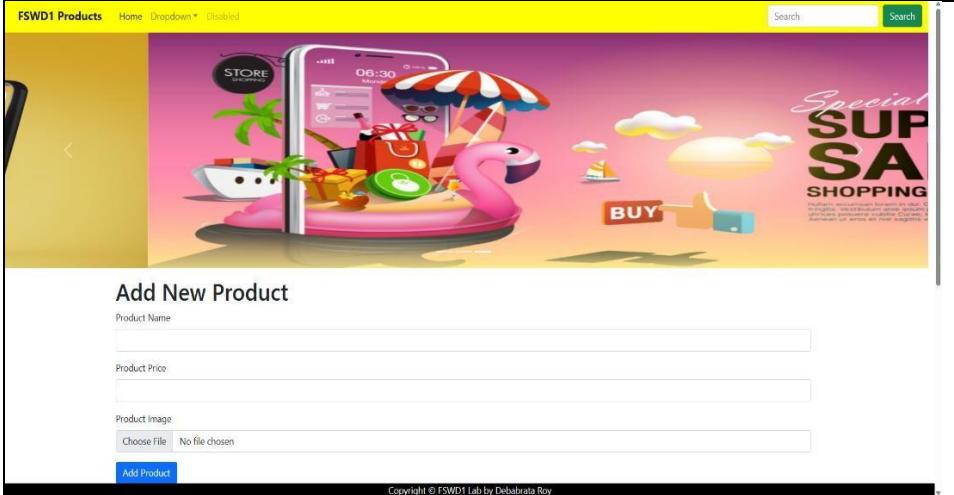
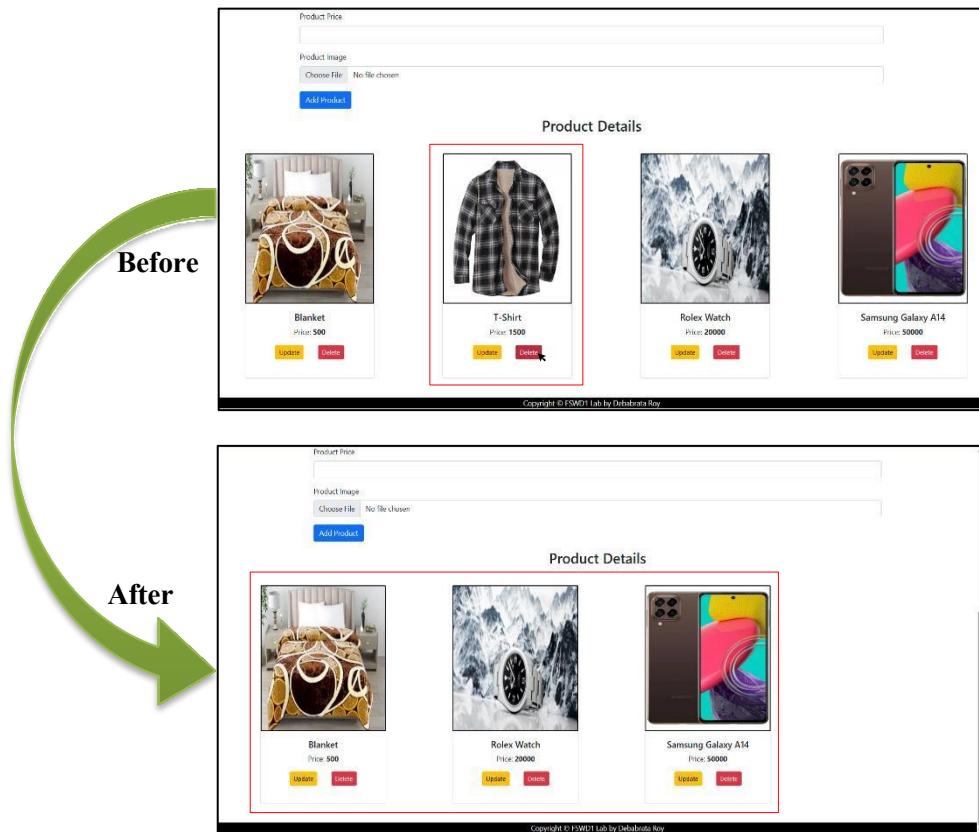
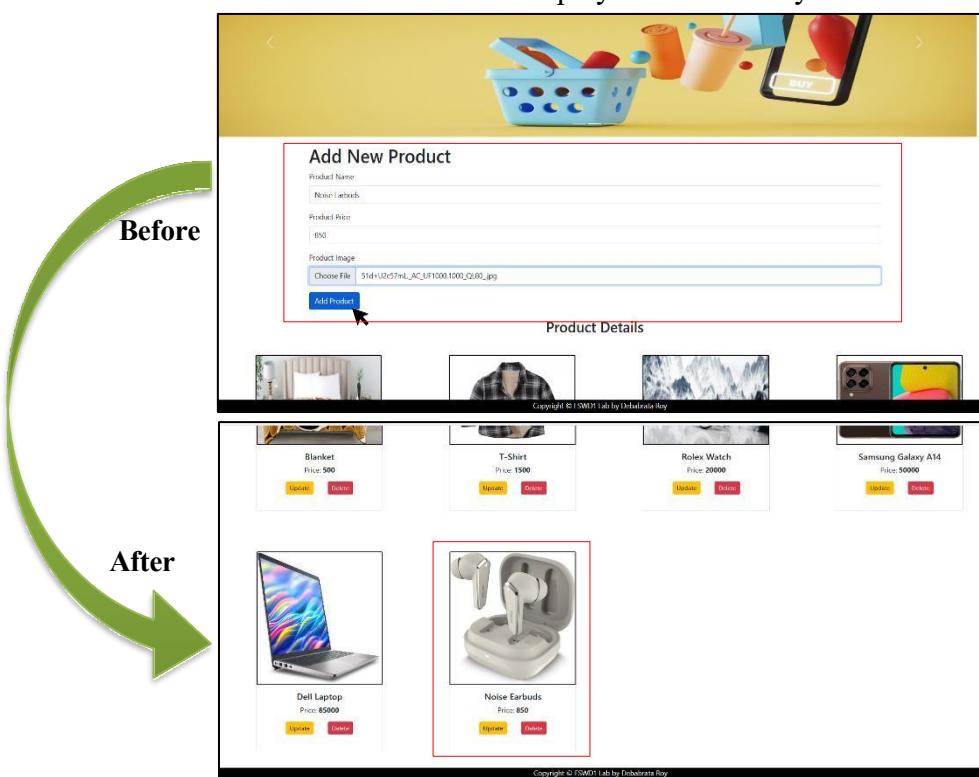


	<b>ITER, SIKSHA 'O' ANUSANDHAN (Deemed to be University)</b>		
			<b>Lab Assignment</b>
Branch	<b>Computer Application</b>	Programme	<b>MCA</b>
Course Name	<b>Full Stack Web Development 1</b>	Semester	<b>I</b>
Course Code	<b>CA3117</b>	Academic Year	<b>2025/Odd</b>
<b>Assignment- 9</b>	<b>Topics: Implementing Single-Page Applications with React</b>		
Learning Level (LL)	<b>L1: Remembering</b>	<b>L3: Application</b>	<b>L5: Evaluation</b>
	<b>L2: Understanding</b>	<b>L4: Analysis</b>	<b>L6: Creation</b>
Q's	Questions		
<b>1</b> <p>Design and develop a React application that displays a list of Products and allows the user to <b>add new products, update existing items, and delete items dynamically</b>. Each item should contain the following information:</p> <ul style="list-style-type: none"> <li>• <b>Product Number (sno)</b></li> <li>• <b>Product Name (title)</b></li> <li>• <b>Product Price (price)</b></li> <li>• <b>Product Image (imag)</b></li> </ul> <p>The application must also allow users to modify existing products. When the user clicks the <b>Update</b> button for a particular item, a form should appear with <b>all the current details of that product</b>. The user can then modify any field and save the updated information by clicking the <b>Modify</b> button.</p> <p>Do the following steps sequentially, in order to develop a React Application:</p> <ol style="list-style-type: none"> <li>1. <b>Header Design:</b> Create a separate <b>Header</b> component. Build a <i>Navigation Bar</i> and <i>Carousel</i> using <b>Bootstrap</b> and include them in the Header. Ensure proper use of <i>props</i> for communication between components.</li> <li>2. <b>Product Data Management:</b> Initialize an array containing at least three sample products. Manage the product list dynamically using <b>React Hooks</b> (such as <i>useState</i>).</li> <li>3. <b>Display All Products:</b> Display all products in card format using Bootstrap for designing and React components. Each item card must show: Product <i>Name, Price</i> and 2 buttons, i.e., <i>Update</i> and <i>Delete</i>.</li> </ol> 	<span style="font-size: small;">COs</span> <span style="font-size: small;">CO6</span>	<span style="font-size: small;">LL</span> <span style="font-size: small;">L6</span>	

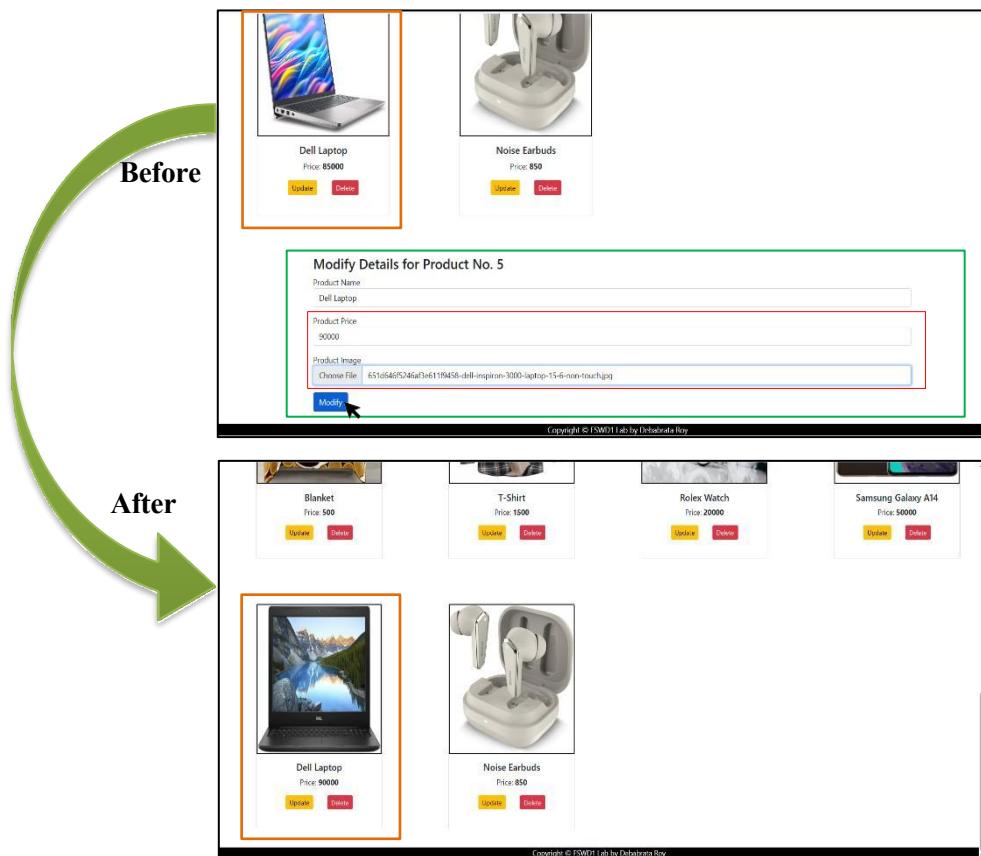
- 4. Delete Functionality:** When the user clicks the Delete button:
- The corresponding product must be removed from the product list.
  - The UI should update immediately *without a page refresh*.



- 5. Add New Product:** Include a form (preferably in a separate component) to add a new product. The form must contain:
- Input for Product Name
  - Input for Product Price
  - File Upload for Product Image
- 6. On submitting the Form:** A new item must be added to the list with the next serial number. The item must be displayed immediately on the UI.



7. **Update Existing Item:** When the user clicks the Update button on any item:
  - a. A form should appear (below the product grid or in a modal).
  - b. The form must be pre-filled with the selected product's current information.
  - c. User should be able to change: Product Name, Price, Image
  
8. **After Submission of Modification:** The selected item must be updated in the item list. The form should disappear after a successful update.



**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.