

Practical No. 6

Study and implementation of ReactJs

Perform following problem statements using ReactJs

Problem Statement 1: To-do List Application with State Management

- Build a simple To-do List application that allows users to add, remove, and mark tasks as completed.
- The app should have a responsive user interface that works well on both desktop and mobile devices.
- Users should be able to input a task, which will be added to the list.
- Each task should have a checkbox to mark it as completed.
- Users can remove tasks from the list.
- Use React hooks like *useState* for state management.
- Add options to filter tasks based on completion status (e.g., all, completed, active).
- Break down the Todo List into multiple components, like TaskList, TaskItem, AddTaskForm, etc.
- The app should display appropriate error messages.
- The candidate should use appropriate error handling and validation to ensure that the application is robust and user-friendly.

Problem Statement 2: Simple E-commerce Cart System

Requirements

- Develop a small e-commerce application where users can browse products and add them to a shopping cart.
- Display a list of products with details like price, name, and image.
- Users can add products to a shopping cart.
- The cart page shows all selected products and their total price.
- Users can remove items from the cart or adjust the quantity.
- Add filtering options (e.g., by price, category) and sorting (e.g., low-to-high, high-to-low).
- Add routing to navigate between different pages, like the product list, cart, and checkout pages.
- On clicking a product, navigate to a detailed view of that product.

Problem Statement 3: User Authentication with React Context API

Requirements

- Create a login form that checks for hardcoded user credentials.
- If authenticated, the user can see a personalized dashboard.
- Allow the user to log out, which resets the context state.
- Use React Router for navigation between login and dashboard pages.
- Protect certain routes (e.g., dashboard) so that only authenticated users can access them.

Note:

1. Create a **document** of the above website with screenshots.
2. Scan the document and **create a pdf file** with “**ExamSeatNum_P#PS#**” as its name.
3. Upload the file on the **WCE /ERP** before the given deadline.