React Revision Tasks – Practical Assignment

Instructor: Sir Talal Ahmed
Course: Frontend Development – ReactJS
Purpose: Revision + Practical Understanding through Fun Tasks

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Instructions for Students

- You are required to complete the following tasks using **ReactJS**.
- Focus on **clean code, proper component structure, and reusability**.
- You are NOT allowed to copy full projects from the internet.
- You may use **Google, documentation, and previous class notes**.
- Each task builds your understanding step-by-step.

Level 1 – React Fundamentals

Task 1: React Playground App

Concepts: JSX, Components, Props

Requirements: - Create a `StudentCard` component - Pass props: name, roll number, batch, favorite language - Render multiple cards using `.map()`

Bonus: - Add light/dark theme using props

Task 2: Emoji Counter Game

Concepts: State, Events

Requirements: - Display an emoji 😊 - Buttons: Increase, Decrease, Reset - Counter should not go below 0

Bonus: - Show a message when count reaches 10

Level 2 – Forms & State

Task 3: Mini Signup Form

Concepts: Forms, Controlled Components

Requirements: - Inputs: Name, Email, Password - On submit, display entered data below the form - Clear form after submission

Bonus: - Disable submit button if fields are empty

Task 4: Todo App with Rules

Concepts: State, Lists, Events

Requirements: - Add a task - Delete a task - Mark task as completed - Show total tasks and completed tasks

Bonus: - Prevent empty task submission

Level 3 – React in Depth

Task 5: Component Composition

Concepts: Component Composition, `children`

Requirements: - Create Layout, Header, Sidebar, Main, Footer components - Use `children` properly

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Task 6: Product Card Generator

Concepts: Props, Reusability

Requirements: - Single ProductCard component - Props: title, price, image, stock status

Bonus: - Disable buy button if product is out of stock

Level 4 – Effects & Data Fetching

Task 7: Fake Store Viewer

Concepts: `useEffect`, API Fetching

Requirements: - Fetch data from Fake Store API - Show loading state - Show error state

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Task 8: Random Joke Generator

Concepts: Effects, Events

Requirements: - Fetch and display random joke - Button to fetch new joke

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Level 5 – SPA & Routing

Task 9: Mini Portfolio SPA

Concepts: React Router DOM

Pages Required: - Home - About - Projects - Contact

Bonus: - 404 Page

Level 6 – State Management

Task 10: Theme Switcher App

Concepts: Context API

Requirements: - Global theme state - Toggle light/dark theme - No prop drilling

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Level 7 – Styling

Task 11: Multi-Styling Challenge

Concepts: Tailwind CSS, Material UI, Styled Components

Requirements: - Same UI styled using different methods

Final Mega Project

React Dashboard Application

Must Include: - Authentication UI (Fake) - Sidebar & Navbar - API Data - Routing - Context API - Styling using Tailwind or MUI

Submission Guidelines

- GitHub Repository (Public)
- Proper README.md

• Hosted Link (Vercel / Netlify)

Evaluation Criteria

• Code Structure
• Component Reusability
• Proper State Management
• UI/UX
• Understanding of Concepts

Best of Luck!

Practice is the key to mastery in React.