React Assignment

Assignment 1: Student Course Management Dashboard

Build a dashboard where students can enroll, drop, and track courses.

Mandatory Requirements:
- React with hooks only (no class components)
- Global state using Context or Redux
- Persistent data using localStorage
- Responsive layout

Assignment 2: Role-Based Login System (Frontend Only)

Create a login system supporting Admin, Teacher, and Student roles.

Mandatory Requirements:
- Conditional routing based on role
- Protected routes
- Form validation (no libraries)
- Session persistence

Assignment 3: Expense Tracker with Analytics

Track expenses and visualize spending patterns.

Mandatory Requirements:
- CRUD operations
- Monthly filtering
- Chart integration (basic)
- Proper state normalization

Assignment 4: Real-Time Search & Filter Application

Implement search with debounce and multiple filters.

Mandatory Requirements:
- Debounce implemented manually
- Case-insensitive search
- Efficient re-render control

Assignment 5: Multi-Step Form with Validation

Create a multi-step registration form.

Mandatory Requirements:
- Step-wise validation
- Progress indicator
- Prevent data loss on refresh

Assignment 6: Custom React Hooks Library

Build reusable custom hooks.

Mandatory Requirements:
- useFetch
- useDebounce
- usePrevious
- Proper documentation

Assignment 7: Task Management App with Drag & Drop

Implement a Kanban-style task board.

Mandatory Requirements:
- Column-based task states
- Drag and drop logic
- State updates without mutation

Assignment 8: Theme Switcher with System Preference

Implement light/dark theme switching.

Mandatory Requirements:
- Detect system theme
- Persist user choice
- CSS variables usage

Assignment 9: API-Driven Product Listing

Consume a public API and render paginated results.

Mandatory Requirements:
- Pagination logic
- Loading & error states
- Clean separation of API logic

Assignment 10: Notification System

Build an in-app notification system.

Mandatory Requirements:
- Auto-dismiss notifications
- Queue handling
- Animation using CSS or Framer Motion

Assignment 11: Online Quiz Application

Timed quiz with score calculation.

Mandatory Requirements:
- Countdown timer
- Prevent answer change after submission
- Result summary screen

Assignment 12: File Upload & Preview App

Allow users to upload and preview files.

Mandatory Requirements:
- Image preview
- Size and type validation
- Error handling

Assignment 13: Searchable User Directory

Display and search users from mock data.

Mandatory Requirements:
- Alphabetical grouping
- Search optimization
- Reusable components

Assignment 14: Shopping Cart with Price Rules

Implement a cart with discounts and taxes.

Mandatory Requirements:
- Derived state calculation
- Avoid redundant state
- Accurate total updates

Assignment 15: Calendar Event Planner

Build a simple calendar with events.

Mandatory Requirements:

- Add/edit/delete events
- Conflict detection
- Date handling without libraries