

# Advanced React Assignment

## Advanced React Assignment

This assignment covers React Hooks, Forms, and Controlled Components to strengthen your understanding of these advanced concepts.

### Task 1: useEffect Hook

1. Create a Timer component that displays the current time and updates every second.
2. Use the useEffect hook to:
  - Start the timer when the component mounts.
  - Clear the interval when the component unmounts.

### Task 2: useContext Hook

1. Create a Theme Context (ThemeContext) with two themes: "light" and "dark".
2. Build a ThemeProvider component that provides the theme value.
3. Create a ThemedButton component that consumes ThemeContext to change its background color based on the theme.
4. Add a button to toggle between light and dark themes.

### Task 3: Custom Hook

1. Create a custom hook useLocalStorage to:
  - Store a value in localStorage.
  - Retrieve it on page reload.
  - Update it when the value changes.
2. Use useLocalStorage in a UserPreferences component to store and retrieve the user's preferred language ("English" or "Hindi").

### Task 4: Handling Forms in React

1. Create a User Registration Form with:
  - Name
  - Email
  - Password
  - Submit button
2. Use controlled components to manage form state.
3. On form submission, log the user details to the console.

### Task 5: Controlled vs Uncontrolled Components

1. Create two forms:
  - One using controlled components (useState for input values).
  - Another using uncontrolled components (useRef to access input values).
2. Display both forms on the page and log their submitted values.

### Task 6: Form Validation

1. Modify the User Registration Form to include validation:
  - Name: Required
  - Email: Must be a valid email format
  - Password: Minimum 6 characters
2. Display validation errors below the input fields if invalid.

### Submission Instructions

- Push your code to GitHub or CodeSandbox.
- Share the link for review.

Let me know if you need any help!