# React Assignment: Managing Data with LocalStorage

## Objective

1. Learn how to use the localStorage API in React.  
2. Implement features to store, retrieve, and delete data from localStorage.  
3. Build a simple Task Manager where tasks are saved persistently.

## Task Description

Create a Task Manager app with the following functionalities:  
  
1. Add a Task:  
- Users can add a task by typing into an input field and clicking an 'Add Task' button.  
- The task will be displayed in a list below the input field.  
- Tasks should be saved in localStorage so that they persist even after a page refresh.  
  
2. View Tasks:  
- On page load, fetch tasks from localStorage and display them in a list.  
  
3. Delete a Task:  
- Each task in the list should have a 'Delete' button.  
- Clicking the 'Delete' button should remove the task from the list and also update localStorage.  
  
4. Clear All Tasks:  
- Provide a 'Clear All' button to remove all tasks from both the UI and localStorage.

## Requirements

1. Use functional components and React Hooks like useState and useEffect.  
2. Use the localStorage API for storing and retrieving tasks.  
3. Validate the input to prevent adding empty tasks.  
4. Use proper styling to make the UI clean and intuitive.

## Hints

1. To save data to localStorage:  
```javascript  
localStorage.setItem('tasks', JSON.stringify(tasksArray));  
```  
  
2. To retrieve data from localStorage:  
```javascript  
const tasks = JSON.parse(localStorage.getItem('tasks')) || [];  
```  
  
3. To remove a specific task, filter the task array and update both the state and localStorage.

## Bonus Challenge

1. Add an 'Edit Task' feature allowing users to edit a task inline.  
2. Add a character limit (e.g., 50 characters) for each task.

## Deliverables

1. A React application that fulfills the requirements.  
2. Clean and commented code.  
3. A demonstration video or screenshots showing the working application.