NAVODAYA INSTITUTE OF TECHNOLOGY

REACT LAB (BCSL657B)

PROGRAM – 4

Develop a To-Do List Application using React functional components that demonstrates the use of the useState hook for state management. Create a functional component named ToDoFunction to manage and display the to-do list. Maintain a list of tasks using state.

Provide an input field for users to add new tasks. Dynamically render the list of tasks below the input field. Ensure each task is displayed in a user-friendly manner. Allow users to delete tasks from the list. Mark tasks as completed or pending, and visually differentiate them.

Step 1: Create a New React Application
First, you need to create a new React app using below command. Open your terminal and run:

npx create-react-app todo-app

cd todo-app

Step 2: Modify the App.js File

App.js

```
import React, { useState } from 'react';
import './App.css';
const ToDoFunction = () => {
```

```jsx
const [tasks, setTasks] = useState([]);

const [newTask, setNewTask] = useState('');


const addTask = () => {
  if (newTask.trim()) {
    setTasks([
      ...tasks,
      { id: Date.now(), text: newTask, completed: false },
    ]);
    setNewTask('');
  }
};


const deleteTask = (taskId) => {
  setTasks(tasks.filter(task => task.id !== taskId));
};


const toggleTaskCompletion = (taskId) => {
  setTasks(tasks.map(task =>
    task.id === taskId
      ? { ...task, completed: !task.completed }
      : task
  ));
};


return (
  <div className="todo-container">
    <h2 className="todo-header">To-Do List</h2>
```

```jsx
<div className="todo-input-wrapper">
  <input
    type="text"
    value={newTask}
    onChange={(e) => setNewTask(e.target.value)}
    placeholder="Add a new task..."
    className="todo-input"
  />
  <button className="add-task-button" onClick={addTask}>Add Task</button>
</div>


<ul className="todo-list">
  {tasks.map((task) => (
    <li
      key={task.id}
      className={`todo-item ${task.completed ? 'completed' : ''}`}
    >
      <span
        className="task-text"
        onClick={() => toggleTaskCompletion(task.id)}
      >
        {task.text}
      </span>
      <button
        className="delete-button"
        onClick={() => deleteTask(task.id)}
      >
        ✖
      </button>
```

```
        </li>
      ))}
    </ul>
  </div>
 );
};


export default ToDoFunction;
```

Step 3: Start the Development Server

In the terminal inside VSCode, run the following command to start the React development

npm start

OUTPUT