 Marwadi University	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Subject: AWT (01CT1625)	Aim: Create modern, scalable and high-speed Web Applications with React and Node.js +Express.	
Experiment No: 5	Date:	Enrollment No: 92200133005

AIM: Create modern, scalable and high-speed Web Applications with React and Node.js +Express.

CODE:

```
const mongoose = require('mongoose');

import React, { useState } from 'react';

import { useNavigate } from 'react-router-dom';

import axios from 'axios';

const AddTask = () => {

  const [title, setTitle] = useState("");

  const [description, setDescription] = useState("");

  const navigate = useNavigate();

  const handleSubmit = async (e) => {

    e.preventDefault();

    if (!title) {

      alert('Please add a title');

      return; }

    try {

      await axios.post('http://localhost:5000/api/tasks', {

        title,

        description,


        completed: false});

      navigate('/');

    } catch (err) {

      console.error(err); } }

export default AddTask;
```

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```
<div className="task-actions">
```

```
  { !task.completed && (
```

```
    <button
```

```
      className="btn btn-complete"
```

```
      onClick={() => toggleComplete(task._id, task.completed)} >
```

```
        Mark Complete
```

```
    </button> )}
```

```
<button className="btn btn-delete" onClick={() => deleteTask(task._id)}>
```

```
  Delete
```

```
</button>
```

```
import React, { useState, useEffect } from 'react';
```

```
import axios from 'axios';
```

```
import TaskItem from './TaskItem';
```

```
const TaskList = () => {
```

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

```
  const [loading, setLoading] = useState(true);
```

```
  useEffect(() => {
```

```
    const fetchTasks = async () => {
```

```
      try {
```


```
        const res = await axios.get('http://localhost:5000/api/tasks');
```

```
        setTasks(res.data);
```

```
        setLoading(false);
```

```
      } catch (err) {
```

```
        console.error(err);
```

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```

    setLoading(false);});

fetchTasks();

}, []);

const deleteTask = async (id) => {

  try {

    await axios.delete(`http://localhost:5000/api/tasks/${id}`);

    setTasks(tasks.filter(task => task._id !== id));

  } catch (err) {

    console.error(err); }

};

const toggleComplete = async (id, completed) => {

  try {

    const res = await axios.patch(`http://localhost:5000/api/tasks/${id}`, {

      completed: !completed });

    setTasks(tasks.map(task =>

      task._id === id ? { ...task, completed: res.data.completed } : task ));

  } catch (err) {

    console.error(err); }

};

if (loading) {

  return <h2>Loading...</h2>;}

return (


  <div className="task-list">

    <h2>Your Tasks</h2>

    {tasks.length === 0 ? (

      <p>No tasks found. Add some tasks!</p>

```

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```

) : (
  tasks.map(task => (
    <TaskItem
      key={task._id}
      task={task}
      deleteTask={deleteTask}
      toggleComplete={toggleComplete}
    />)))}
</div> );};

export default TaskList;

const express = require('express');

const router = express.Router();

const Task = require('../models/Task');

// Get all tasks

router.get('/', async (req, res) => {

  try {

    const tasks = await Task.find().sort({ createdAt: -1 });

    res.json(tasks);

  } catch (err) {

    res.status(500).json({ message: err.message });


  });

// Create a task

router.post('/', async (req, res) => {

  const task = new Task({

```

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```

    title: req.body.title,
    description: req.body.description,
    completed: req.body.completed });
  try {
    const newTask = await task.save();
    res.status(201).json(newTask);
  } catch (err) {
    res.status(400).json({ message: err.message });
  });
}

// Update a task
router.patch('/:id', async (req, res) => {
  try {
    const task = await Task.findById(req.params.id);
    if (!task) {
      return res.status(404).json({ message: 'Task not found' });
    }
    if (req.body.title) task.title = req.body.title;
    if (req.body.description) task.description = req.body.description;
    if (req.body.completed !== undefined) task.completed = req.body.completed;
    const updatedTask = await task.save();
    res.json(updatedTask);
  } catch (err) {
    res.status(500).json({ message: err.message });
  });
}

// Delete a task

```

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```

router.delete('/:id', async (req, res) => {

  try {

    const task = await Task.findById(req.params.id);

    if (!task) {

      return res.status(404).json({ message: 'Task not found' });}

    // Replace task.remove() with findByIdAndDelete

    await Task.findByIdAndDelete(req.params.id);

    res.json({ message: 'Task deleted' });

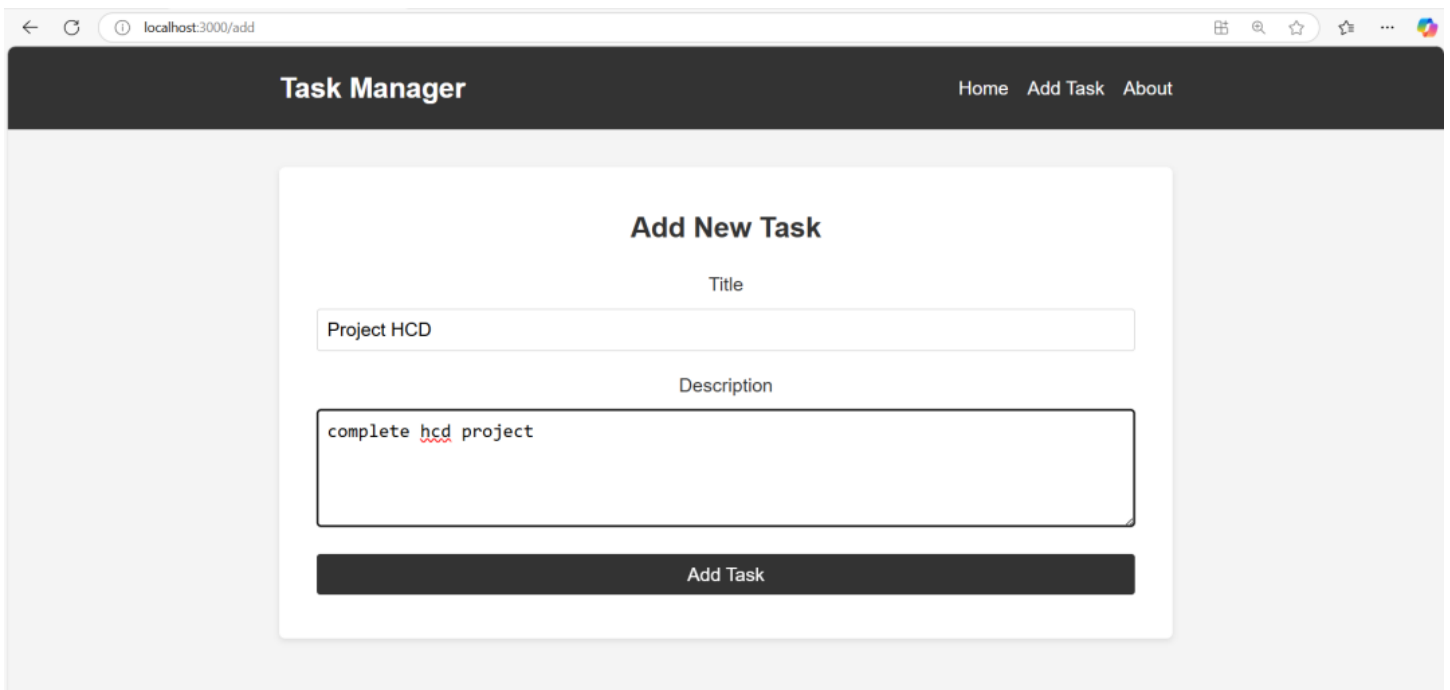
  } catch (err) {

    res.status(500).json({ message: err.message });});


module.exports = router;

```

OUTPUT:



The screenshot displays a web browser window at the URL `localhost:3000/add`. The application, titled "Task Manager", features a dark navigation bar with links for "Home", "Add Task", and "About". The main section, "Add New Task", includes a form with two input fields. The "Title" field contains the text "Project HCD", and the "Description" field contains "complete hcd project". A dark "Add Task" button is positioned at the bottom of the form.

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The image displays a web browser window at the top and a MongoDB Compass interface at the bottom.

Web Browser Window:

- Address bar: localhost:3000
- Page Title: Task Manager
- Navigation Links: Home, Add Task, About
- Section: Your Tasks
- Task 1: Homework
 - Description: ddv task
 - Created: 6/4/2025
 - Action: Delete
- Task 2: Project HCD
 - Description: complete hcd project
 - Created: 6/4/2025
 - Actions: Mark Complete, Delete

MongoDB Compass Interface:

- Connections: localhost:27017/task-manager.tasks
- Database: task-manager, Collection: tasks
- Documents: 2
- Query: Type a query: { field: 'value' } or Generate query
- Buttons: ADD DATA, EXPORT DATA, UPDATE, DELETE
- Results (25 items, 1-2 of 2):
 - Document 1:

```
{
  "_id": ObjectId('67f2bc3b7f18bbdef24eebd0'),
  "title": "Project HCD",
  "description": "complete hcd project",
  "completed": false,
  "createdAt": 2025-04-06T17:39:07.965+00:00,
  "__v": 0
}
```
 - Document 2:

```
{
  "_id": ObjectId('67f2bcab7f18bbdef24eebd4'),
  "title": "Homework",
  "description": "ddv task",
  "completed": true,
  "createdAt": 2025-04-06T17:40:59.213+00:00,
  "__v": 0
}
```