	Marwadi University **Faculty of Technology** **Department of Information and Communication Technology**
Subject: AWT (01CT1625)	**Aim: Develop a web application which involves database operations using NodeJS.**
Experiment No: 2	**Date:** **Enrollment No: 92200133005**

AIM: Develop a web application which involves database operations using NodeJS.

CODE:

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

const userSchema = new mongoose.Schema({

  name: {

    type: String, required: true },

  email: {

    type: String, required: true, unique: true },

  age: {

    type: Number, required: true  },

  createdAt: {

    type: Date, default: Date.now}});

module.exports = mongoose.model('User', userSchema);

const express = require('express');

const router = express.Router();

const User = require('../models/user');

// Get all users

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

  try {

    const users = await User.find();

    res.json(users);

  } catch (err) {

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

  }}); // Get a single user
```

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

  try {

    const user = await User.findById(req.params.id);

    if (!user) return res.status(404).json({ message: 'User not found' });

    res.json(user);

  } catch (err) {

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

  }});

// Create a user

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

  const user = new User({

    name: req.body.name,

    email: req.body.email,

    age: req.body.age});

  try {

    const newUser = await user.save();

    res.status(201).json(newUser);

  } catch (err) {

    res.status(400).json({ message: err.message });

  }});

// Update a user

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

  try {

    const user = await User.findById(req.params.id);
```

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```
    if (!user) return res.status(404).json({ message: 'User not found' });

    if (req.body.name) user.name = req.body.name;

    if (req.body.email) user.email = req.body.email;

    if (req.body.age) user.age = req.body.age;

    const updatedUser = await user.save();

    res.json(updatedUser);

  } catch (err) {

    res.status(400).json({ message: err.message }); }});

// Delete a user

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

  try {

    const user = await User.findById(req.params.id);

    if (!user) return res.status(404).json({ message: 'User not found' });

    await user.remove();

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

  } catch (err) {

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

module.exports = router;

<script>

    document.addEventListener('DOMContentLoaded', function() {

      const userForm = document.getElementById('userForm');

      const usersList = document.getElementById('usersList');

      const cancelBtn = document.getElementById('cancelBtn');

      // Load users on page load
```

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```
    fetchUsers();

    // Form submission

    userForm.addEventListener('submit', function(e) {

        e.preventDefault();

        const userId = document.getElementById('userId').value;

        const userData = {

            name: document.getElementById('name').value,

            email: document.getElementById('email').value,

            age: document.getElementById('age').value};

        if (userId) {

            // Update existing user

            updateUser(userId, userData);

        } else {

            // Create new user

            createUser(userData);

    }});    // Cancel edit

    cancelBtn.addEventListener('click', function() {

        resetForm();  });

// Fetch all users

    function fetchUsers() {

        fetch('/api/users')

            .then(response => response.json())

            .then(users => {

                usersList.innerHTML = '';
```

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```
        users.forEach(user => {

            const row = document.createElement('tr');

            usersList.appendChild(row);});})

        .catch(error => console.error('Error fetching users:', error));}

// Create a new user

    function createUser(userData) {

      fetch('/api/users', {

        method: 'POST',

        headers: {

          'Content-Type': 'application/json'},

        body: JSON.stringify(userData)})

      .then(response => response.json())

      .then(() => {

        resetForm();

        fetchUsers();})

      .catch(error => console.error('Error creating user:', error));}

    // Update an existing user

    function updateUser(userId, userData) {

      fetch(`/api/users/${userId}`, {

        method: 'PUT',

        headers: {

          'Content-Type': 'application/json'},

        body: JSON.stringify(userData)})

      .then(response => response.json())
```

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```
    .then(() => {

        resetForm();

        fetchUsers();})

    .catch(error => console.error('Error updating user:', error));}

// Reset the form

function resetForm() {

    document.getElementById('userId').value = '';

    document.getElementById('name').value = '';

    document.getElementById('email').value = '';

    document.getElementById('age').value = '';

    document.getElementById('cancelBtn').style.display = 'none';

}


// Make these functions available globally

window.editUser = function(userId) {

    fetch(`/api/users/${userId}`)

        .then(response => response.json())

        .then(user => {

            document.getElementById('userId').value = user._id;

            document.getElementById('name').value = user.name;

            document.getElementById('email').value = user.email;

            document.getElementById('age').value = user.age;

            document.getElementById('cancelBtn').style.display = 'inline';})

        .catch(error => console.error('Error fetching user:', error));};
```

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```
window.deleteUser = function(userId) {

    if (confirm('Are you sure you want to delete this user?')) {

        fetch(`/api/users/${userId}`, {

            method: 'DELETE'

        })

        .then(() => {

            fetchUsers();})

        .catch(error => console.error('Error deleting user:', error));

    }}; });

</script>
```

OUTPUT:

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