	Marwadi University	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
```



Department of Information and Communication Technology

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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())
```



Department of Information and Communication Technology

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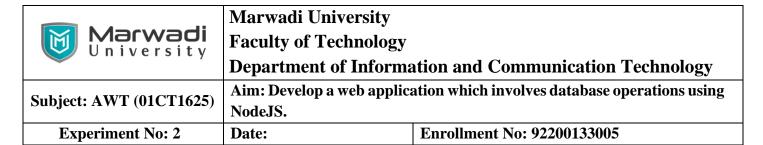
Aim: Develop a web application which involves database operations using NodeJS.

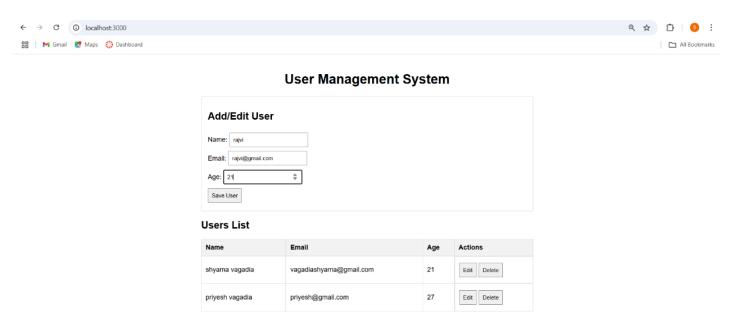
```
.then(() => {
     resetForm();
     fetchUsers();})
  .catch(error => console.error('Error updating user:', error));}
// Reset the form
function resetForm() {
  document.getElementById('userId').value = ";
  document.getElementById('name').value = ";
  document.getElementById('email').value = ";
  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));
        }}; });
```

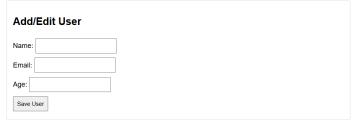
OUTPUT:







User Management System



Users List

Name	Email	Age	Actions
shyama vagadia	vagadiashyama@gmail.com	21	Edit Delete
priyesh vagadia	priyesh@gmail.com	27	Edit Delete
rajvi	rajvi@gmail.com	21	Edit Delete