Marwadi University Marwadi Chandarana Group NAAC A+	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**
Subject: Advanced Web Technology	**Aim:** Create a RESTful service with Node, Express and MongoDB
Experiment :- 6	**Date:- 10-03-2025** / **Enrollment No:- 92200133003**

Objective : Create a RESTful service with Node, Express and MongoDB

CODE:

Model

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

const employeeSchema = new mongoose.Schema({
  name: { type: String, required: true },
  position: String,
  salary: Number,
  email: { type: String, unique: true }
});

module.exports = mongoose.model('Employee', employeeSchema);
```

Routes

```
const express = require('express');
const router = express.Router();
const Employee = require('../models/employee');

// Create a new employee
router.post('/', async (req, res) => {
  try {
    const employee = new Employee(req.body);
    await employee.save();
    res.status(201).json(employee);
  } catch (err) {
    res.status(400).json({ error: err.message });
  }
});

// Get all employees
router.get('/', async (req, res) => {
  const employees = await Employee.find();
  res.json(employees);
});

// Get a specific employee
router.get('/:id', async (req, res) => {
  try {
    const employee = await Employee.findById(req.params.id);
    if (!employee) return res.status(404).json({ error: 'Not found' });
    res.json(employee);
  } catch (err) {
    res.status(400).json({ error: err.message });
  }
});

// Update an employee
router.put('/:id', async (req, res) => {
  try {
    const employee = await Employee.findByIdAndUpdate(req.params.id, req.body, { new: true });
    res.json(employee);
  } catch (err) {
    res.status(400).json({ error: err.message });
  }
});

// Delete an employee
router.delete('/:id', async (req, res) => {
  try {
    await Employee.findByIdAndDelete(req.params.id);
    res.json({ message: 'Employee deleted' });
```

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

module.exports = router;
```

Server

```
const express = require("express");
const mongoose = require("mongoose");
const bodyParser = require("body-parser");

const app = express();
const PORT = 3001;

// Middleware
app.use(bodyParser.json());

// MongoDB connection
mongoose.connect("mongodb://127.0.0.1:27017/employeedb")
 .then(() => console.log("✅ Connected to MongoDB"))
 .catch((err) => console.error("❌ MongoDB connection error:", err));

// Schema
const employeeSchema = new mongoose.Schema({
 name: { type: String, required: true },
 position: String,
 salary: Number,
 email: String
});

// Model
const Employee = mongoose.model("Employee", employeeSchema);

// Routes

// POST: Add new employee(s)
app.post("/api/employees", async (req, res) => {
 try {
  const data = req.body;

  const result = Array.isArray(data)
   ? await Employee.insertMany(data)
   : await new Employee(data).save();

  res.status(201).json(result);
 } catch (error) {
  res.status(400).json({ error: error.message });
 }
});

// GET: All employees
app.get("/api/employees", async (req, res) => {
 try {
  const employees = await Employee.find();
  res.json(employees);
 } catch (error) {
  res.status(500).json({ error: error.message });
 }
});

// GET: Single employee
app.get("/api/employees/:id", async (req, res) => {
 try {
  const employee = await Employee.findById(req.params.id);
  if (!employee) return res.status(404).json({ message: "Employee not found" });
  res.json(employee);
 } catch (error) {
```

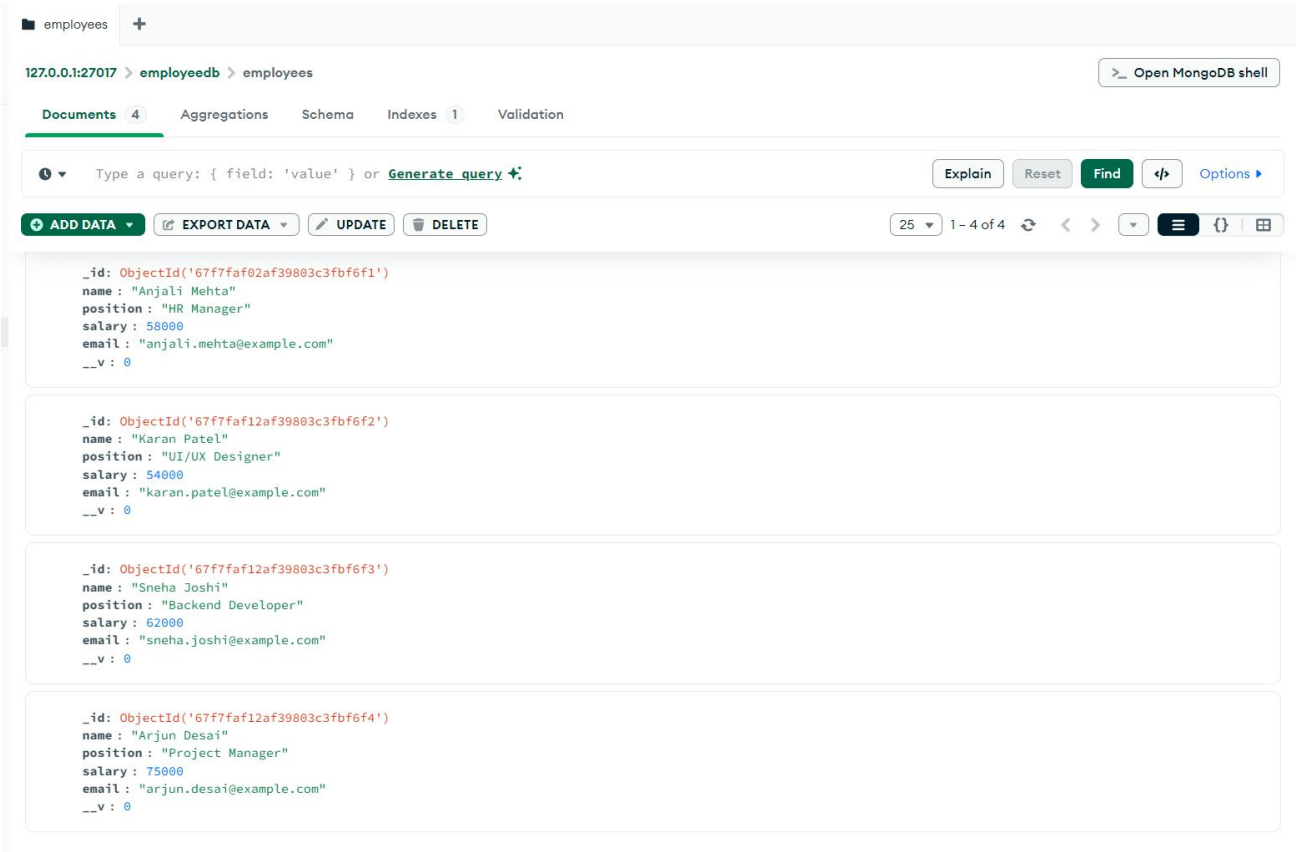
```
  res.status(500).json({ error: error.message });
 }
});

// PUT: Update employee
app.put("/api/employees/:id", async (req, res) => {
 try {
  const updated = await Employee.findByIdAndUpdate(req.params.id, req.body, { new: true });
  if (!updated) return res.status(404).json({ message: "Employee not found" });
  res.json(updated);
 } catch (error) {
  res.status(500).json({ error: error.message });
 }
});

// DELETE: Remove employee
app.delete("/api/employees/:id", async (req, res) => {
 try {
  const deleted = await Employee.findByIdAndDelete(req.params.id);
  if (!deleted) return res.status(404).json({ message: "Employee not found" });
  res.json({ message: "Employee deleted" });
 } catch (error) {
  res.status(500).json({ error: error.message });
 }
});

// Start server
app.listen(PORT, () => {
 console.log(`  Server running at http://localhost:${PORT}`);
});
```

OUTPUT :



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GET

GET http://localhost:3001/api/employees Send

Query Headers 2 Auth Body 1 Tests Pre Run

JSON XML Text Form Form-encode GraphQL Binary

JSON Content Format

Status: 200 OK Size: 567 Bytes Time: 15 ms

Response Headers 6 Cookies Results Docs


```
[
  {
    "_id": "67f7faf02af39803c3fbf6f1",
    "name": "Anjali Mehta",
    "position": "HR Manager",
    "salary": 58000,
    "email": "anjali.mehta@example.com",
    "__v": 0
  },
  {
    "_id": "67f7faf12af39803c3fbf6f2",
    "name": "Karan Patel",
    "position": "UI/UX Designer",
    "salary": 54000,
    "email": "karan.patel@example.com",
    "__v": 0
  },
```


POST

POST http://localhost:3001/api/employees Send

Query Headers 2 Auth Body 1 Tests Pre Run

JSON XML Text Form Form-encode GraphQL Binary

JSON Content Format


```
{
  "name": "Rekha Joshi",
    "position": "PHP Developer",
    "salary": 62000,
    "email": "rekha.joshi@example.com"
}
```


Status: 201 Created Size: 139 Bytes Time: 19 ms

Response Headers 6 Cookies Results Docs


```
{
  "name": "Rekha Joshi",
  "position": "PHP Developer",
  "salary": 62000,
  "email": "rekha.joshi@example.com",
  "_id": "67f7fe452af39803c3fbf6fc",
  "__v": 0
}
```


PUT

PUT http://localhost:3001/api/employees/67f7fe452af39803c3fbf6fc Send

Query Headers 2 Auth Body 1 Tests Pre Run

JSON XML Text Form Form-encode GraphQL Binary

JSON Content Format


```
{
  "name": "Rekha Joshi",
    "position": "PHP Developer",
    "salary": 88000,
    "email": "rekha.joshi@example.com"
}
```


Status: 200 OK Size: 139 Bytes Time: 22 ms

Response Headers 6 Cookies Results Docs


```
{
  "_id": "67f7fe452af39803c3fbf6fc",
  "name": "Rekha Joshi",
  "position": "PHP Developer",
  "salary": 88000,
  "email": "rekha.joshi@example.com",
  "__v": 0
}
```


DELETE

DELETE http://localhost:3001/api/employees/67f7fe452af39803c3fbf6fc Send

Query Headers 2 Auth Body 1 Tests Pre Run

JSON XML Text Form Form-encode GraphQL Binary

JSON Content Format

Status: 200 OK Size: 30 Bytes Time: 15 ms

Response Headers 6 Cookies Results Doc


```
{
  "message": "Employee deleted"
}
```