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➢ NodeJs PRACTISE 5.2

- CODE

Server.js (Main server):

```
// server.js
const express = require('express');
const mongoose = require('mongoose');
const studentRoutes = require('./routes/studentRoutes');

const app = express();
app.use(express.json());

// MongoDB Connection
mongoose.connect('mongodb+srv://alpha:alpha2025@cluster0.gttfsb5.mongodb.net/?retryWrites=true&w=majority&appName=Cluster0')
.then(() => console.log('Connected to MongoDB'))
.catch(err => console.error('MongoDB connection error:', err.message));

// Routes
app.use('/students', studentRoutes);

// Start Server
const PORT = 3000;
app.listen(PORT, () => {
  console.log(`Server running on http://localhost:${PORT}`);
});
```

/models/Student.js :

```
// models/Student.js
const mongoose = require('mongoose');

const StudentSchema = new mongoose.Schema({
  name: {
    type: String,
    required: true,
    trim: true
  },
  age: {
    type: Number,
    required: true,
    min: 1
  },
  course: {
    type: String,
    required: true,
    trim: true
  },
  createdAt: {
    type: Date,
    default: Date.now
  }
});

module.exports = mongoose.model('Student', StudentSchema);
```

/controller/studentController.js :

```
// controllers/studentController.js
const Student = require('../models/Student');

// Create new student
exports.createStudent = async (req, res) => {
  try {
    const { name, age, course } = req.body;
    const student = new Student({ name, age, course });
    const savedStudent = await student.save();
    res.status(201).json(savedStudent);
  } catch (error) {
    res.status(400).json({ message: error.message });
```

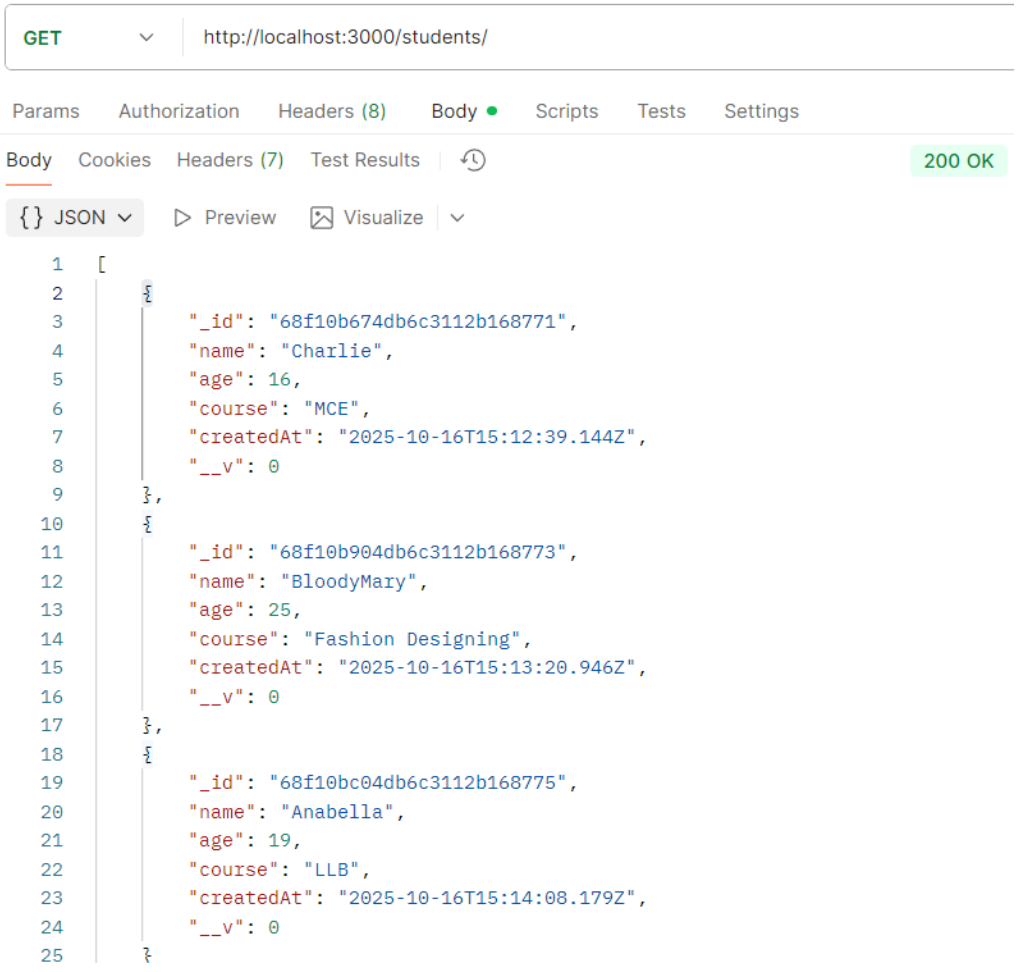
```
  }
};

// Get all students
exports.getAllStudents = async (req, res) => {
  try {
    const students = await Student.find();
    res.json(students);
  } catch (error) {
    res.status(500).json({ message: error.message });
  }
};

// Get single student by ID
exports.getStudentById = async (req, res) => {
  try {
    const student = await Student.findById(req.params.id);
    if (!student) return res.status(404).json({ message: 'Student not found' });
    res.json(student);
  } catch (error) {
    res.status(500).json({ message: error.message });
  }
};

// Update student by ID
exports.updateStudent = async (req, res) => {
  try {
    const { name, age, course } = req.body;
    const updatedStudent = await Student.findByIdAndUpdate(
      req.params.id,
      { name, age, course },
      { new: true }
    );
    if (!updatedStudent) return res.status(404).json({ message: 'Student not
found' });
    res.json(updatedStudent);
  } catch (error) {
    res.status(400).json({ message: error.message });
  }
};

// Delete student by ID
exports.deleteStudent = async (req, res) => {
  try {
    const student = await Student.findById(req.params.id);
```

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

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

    res.json({
      message: 'Student deleted successfully',
      deletedStudent: {
        id: student._id,
        name: student.name,
        age: student.age,
        course: student.course
      }
    });

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

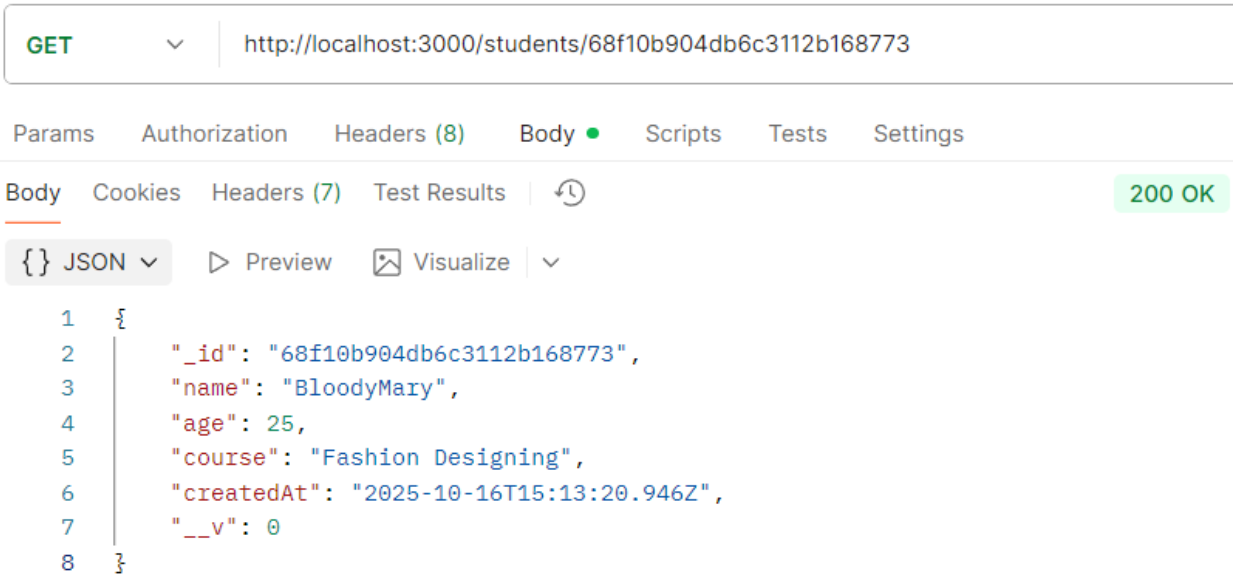
/routes/studentRoutes.js :

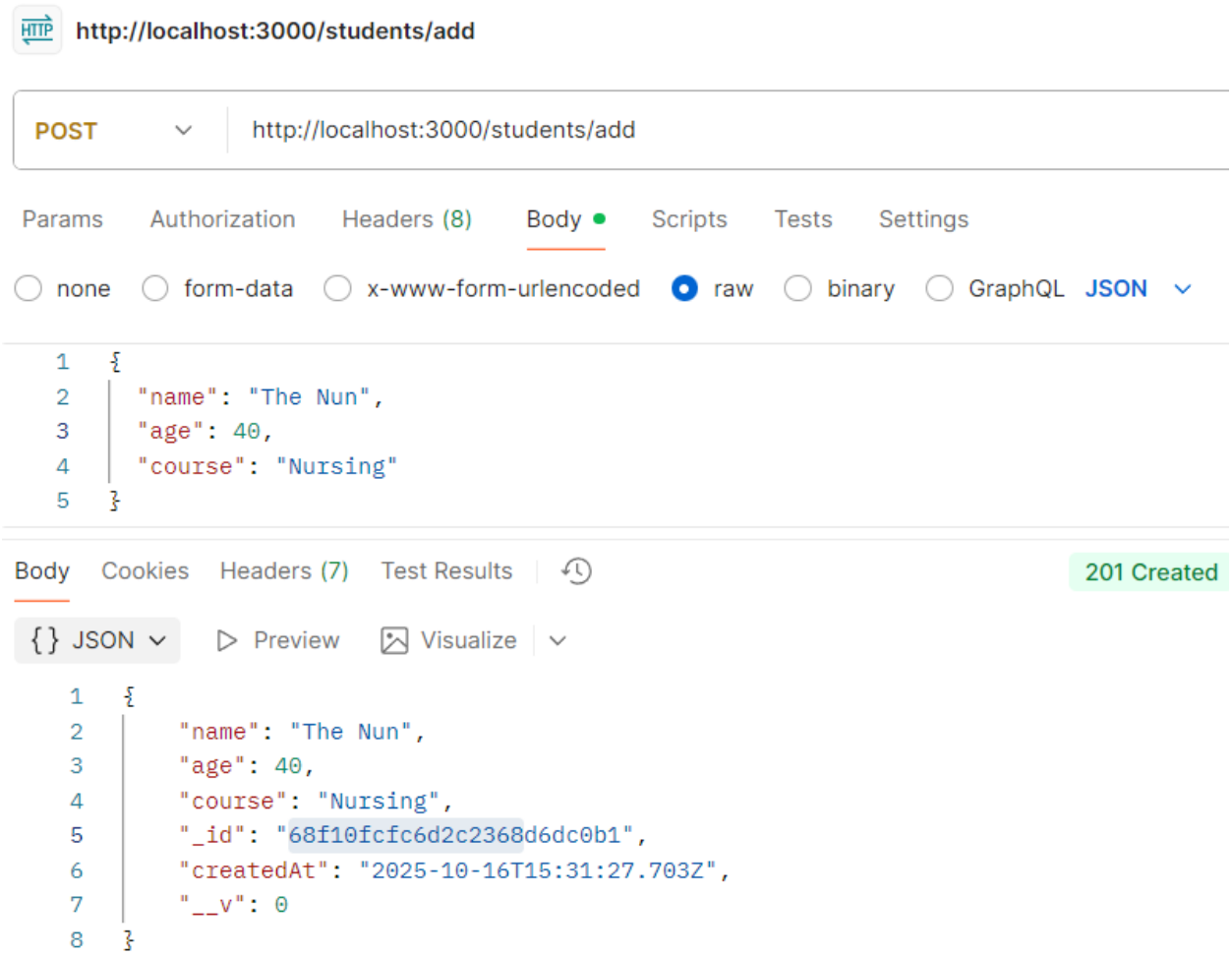
```
// routes/studentRoutes.js
const express = require('express');
const router = express.Router();
const studentController = require('../controllers/studentController');

// CRUD Routes
router.post('/add', studentController.createStudent);
router.get('/', studentController.getAllStudents);
router.get('/:id', studentController.getStudentById);
router.put('/:id', studentController.updateStudent);
router.delete('/:id', studentController.deleteStudent);

module.exports = router;
```

- OUTPUT



http://localhost:3000/students/68f10b904db6c3112b168773





Output Link (Postman) : http://localhost:3000/students/

API's: GET http://localhost:3000/students/

GEThttp://localhost:3000/students/(id)

DELETE http://localhost:3000/students/(id)

POST http://localhost:3000/students/add