



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
Munshi Nagar, Andheri (W), Mumbai - 400058
DEPARTMENT OF MASTER OF COMPUTER APPLICATION

CLASS: F.Y. MCA

SEM: I

COURSE CODE: MC504

SUBJECT NAME: WEB TECHNOLOGY LAB

ROLL NO.: 59

BATCH: D

NAME: Chaitanva Shetty

EXPERIMENT NO: 9

EXPERIMENT TITLE: Build a basic CRUD application with node and express

Objective: Build a RESTful CRUD (Create, Retrieve, Update, Delete) API with Node.js, Express and MongoDB. We'll use Mongoose for interacting with the MongoDB instance. We'll start by building a simple web server and then move on to configuring the database, building the model and different routes for handling all the CRUD operations. Finally, we'll test our REST APIs using Postman.

DATE TURN 1:

DATE TURN 2:

PRACTICAL EVALUATION:

Marks will be given as Very Good (2), Good (1.5), Average (1) or Poor (0.5).

PI1: Experimental Procedures	PI2: Designing skills	PI3: Debugging capacity & Efforts taken	PI4: Result s and Q&A	PI5: Lab Ethics	Marks Per Experiment	
2	2	2	2	2	10	



Express.js

```
const express = require("express");
const app = express();
const port = 3001;
const router = express.Router();
const bodyParser = require("body-parser");

app.use(bodyParser.json());
app.use(bodyParser.urlencoded({
  extended: true
}))
const mongoose = require("mongoose");
// const ejss = require('ejs');
app.set('view engine', 'ejs');
const mongodb = require("mongodb");
// const { default: mongoose } = require("mongoose");
const MongoClient = mongodb.MongoClient;

const uri =
  "mongodb+srv://Aditya:aditya@cluster0.cjcxbyq.mongodb.net/?retryWrites=true&w=majority/test";
const client = new MongoClient(uri, {useNewUrlParser: true, useUnifiedTopology: true});

const studentSchema = {
  _id: Number,
  name: String,
  department: String,
}
const Student = mongoose.model('students', studentSchema);

async function connect(){

  try{
    await mongoose.connect(uri);
    console.log("Conneceted to mongoDb");
    app.get('/', (req, res) => {
      Student.find({}, function(err, student){
        res.render('index', {
          studentList: student
        })
      })
    })
  }
  catch(error){
    console.log(error)
  }
}
```



```
connect()

app.post('/',function(req,res,next){
  const data = new Student({
    // _id:4,
    // name:"Arshita",
    // department:"BSc CS"
    _id:req.body['id'],
    name:req.body["name"],
    department:req.body["department"]
  })

  data.save(function(err,data){
    if(err)return console.error(err);
    res.send("Updated succesfullyz");
  })
})

app.delete("/:id",async(req,res)=>{
  const id =req.params.id
  Student.findOneAndRemove({_id:id},function(err){
    if (err) return res.send({ error: err });
    res.send({ message: "Data deleted successfully!" });
  })
  res.send("done");
})

app.put("/update/:id",async(req,res)=>{
  const id =req.params.id

  let name=req.body["name"];
  let department=req.body["department"]

  Student.findOneAndUpdate({_id:id},{ $set:{name:name,department:department}},{new:false},function(
err,data){
    if (err) return res.status(500).send(err);
    if(data == null){
      res.send("nothing found")
    }
    else{
      res.send(data);
    }
  })
})

app.use("/deleteAll",async(req,res)=>{
  Student.collection.drop((err) => {
    if (err) {
```



```
        console.error(err);
    } else {
        console.log('Collection dropped successfully');
    }
});
});
app.use(express.json());
app.use('/po', router);

app.listen(port, () => {
    console.log(`Student app listening at http://localhost:${port}`);
});
```

Index.ejs

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="style.css">
    <script src="service.js" defer></script>
    <title>Document</title>
</head>
<body>

    <form>
        <label for="id">Enter ID to delete</label>
        <input type="text" id="id" name="id">
        <button type="button" onclick="del()" id="deleteBtn">Delete</button>
    </form>
    <div id="data">
        <div class="sTable">
            <% studentList.forEach(student=>{%>
                <p><%=student._id%></p>
                <p><%=student.name%></p>
                <p><%=student.department%></p>
            <%})%>
        </div>
    </div>

</body>
<script>

// const deleteBtn = document.getElementById("deleteBtn");
// deleteBtn.addEventListener('click', del)

</script>
</html>
```



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Style.css

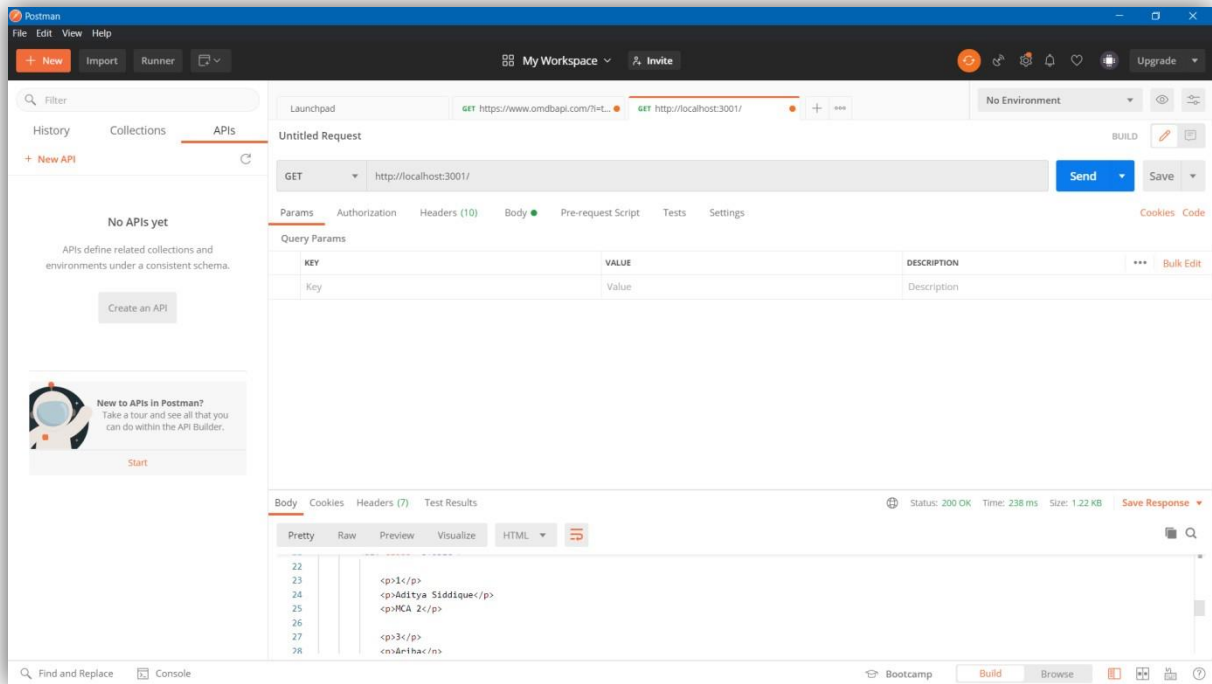
```
body{
  width: 100vw;
  height: 100vh;
  padding: 0;
  margin: 0;
}
#data{
  display: flex;
  justify-content: center;
  align-items: center;
  height: 20rem;
  padding: 0;
  margin: 0;
}
.sTable{
  display: grid;
  width: 25rem;
  grid-template-columns: 1fr 1fr 1fr;
  grid-template-rows: auto;
}
```



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Output:

Read



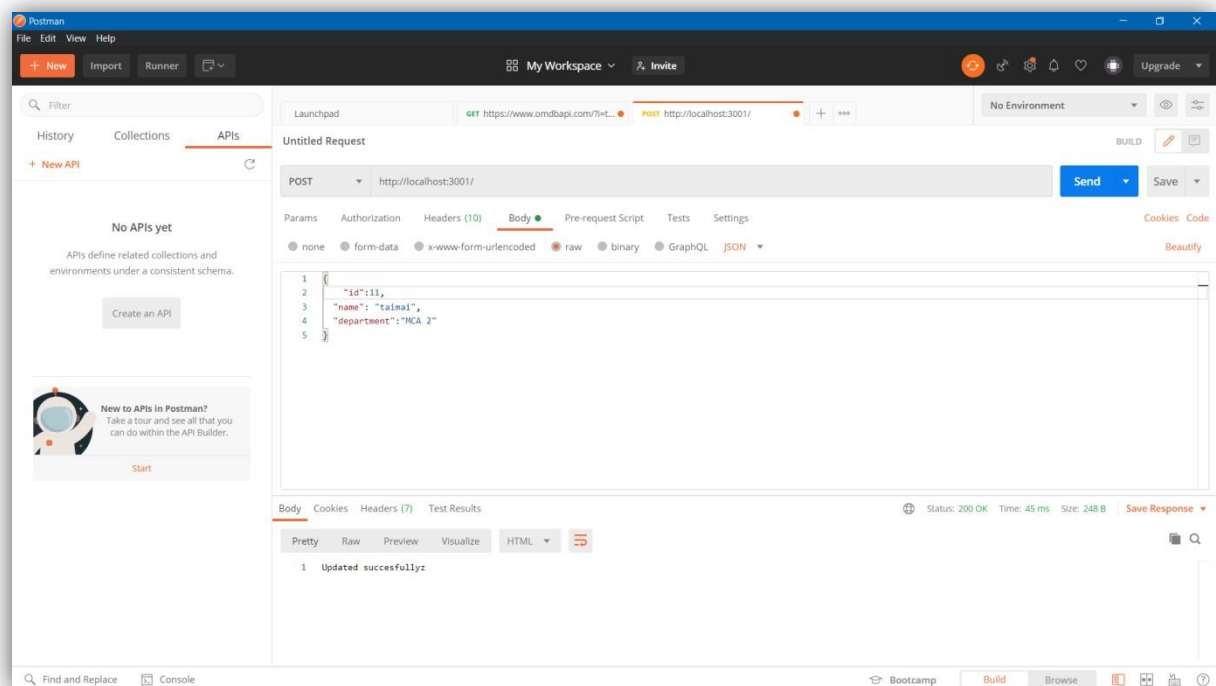


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Enter ID to delete

1	Aditya Siddique	MCA 2
3	Ariba	BSc CS
8	Rohit zimute	MCA 2

Post



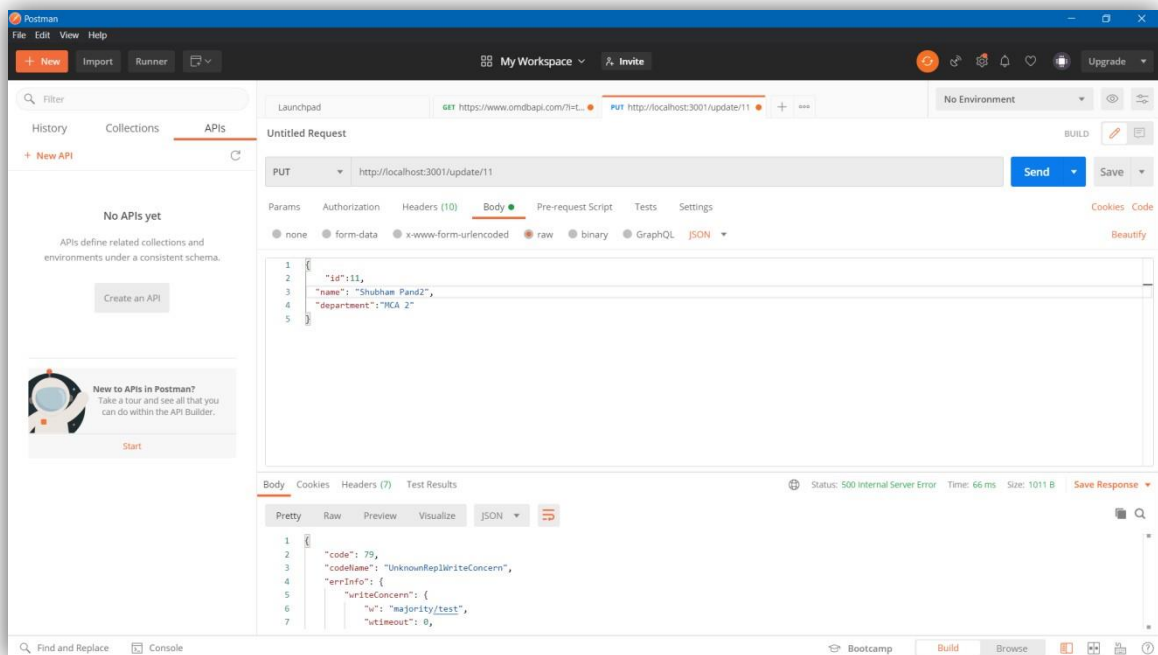


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Enter ID to delete

1	Aditya Siddique	MCA 2
3	Ariba	BSc CS
8	Rohit zianute	MCA 2
10	Chaitanya Shetty	MCA 2
11	taimai	MCA 2

Update



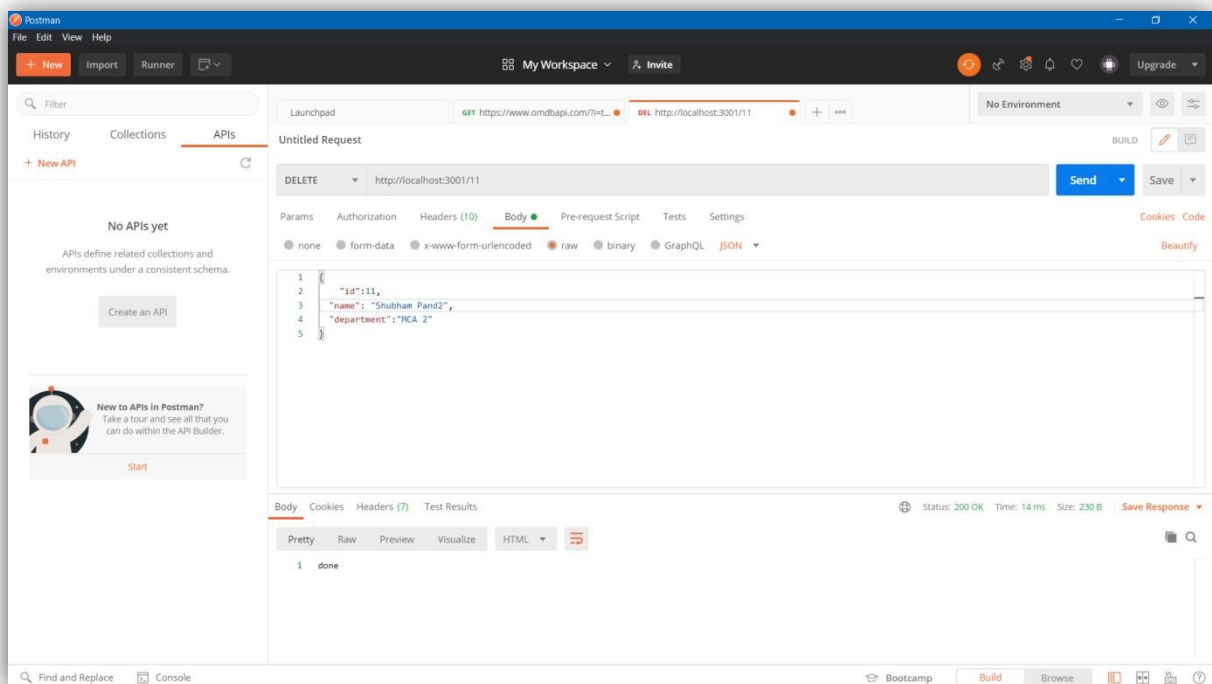


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Enter ID to delete

1	Aditya Siddique	MCA 2
3	Ariba	BSc CS
8	Rohit zianute	MCA 2
10	Chaitanya Shetty	MCA 2
11	Shubham Pand2	MCA 2

Delete





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Enter ID to delete:

Press **F11** to exit full screen

1	Aditya Siddique	MCA 2
3	Ariba	BSc CS
8	Rohit zimute	MCA 2
10	Chaitanya Shetty	MCA 2

Data deleted from MongoDB

Atlas Eren's Org - ... Access Manager Billing All Clusters Get Help Eren

Project 0 Data Services App Services Charts Press **F11** to exit full screen

test.students STORAGE SIZE: 36KB LOGICAL DATA SIZE: 268B TOTAL DOCUMENTS: 4 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

FILTER { field: 'value' } OPTIONS Apply Reset

```
{
  "_id": 3,
  "name": "Ariba",
  "department": "BSc CS",
  "_v": 0
}
```

```
{
  "_id": 8,
  "name": "Rohit zimute",
  "department": "MCA 2",
  "_v": 0
}
```

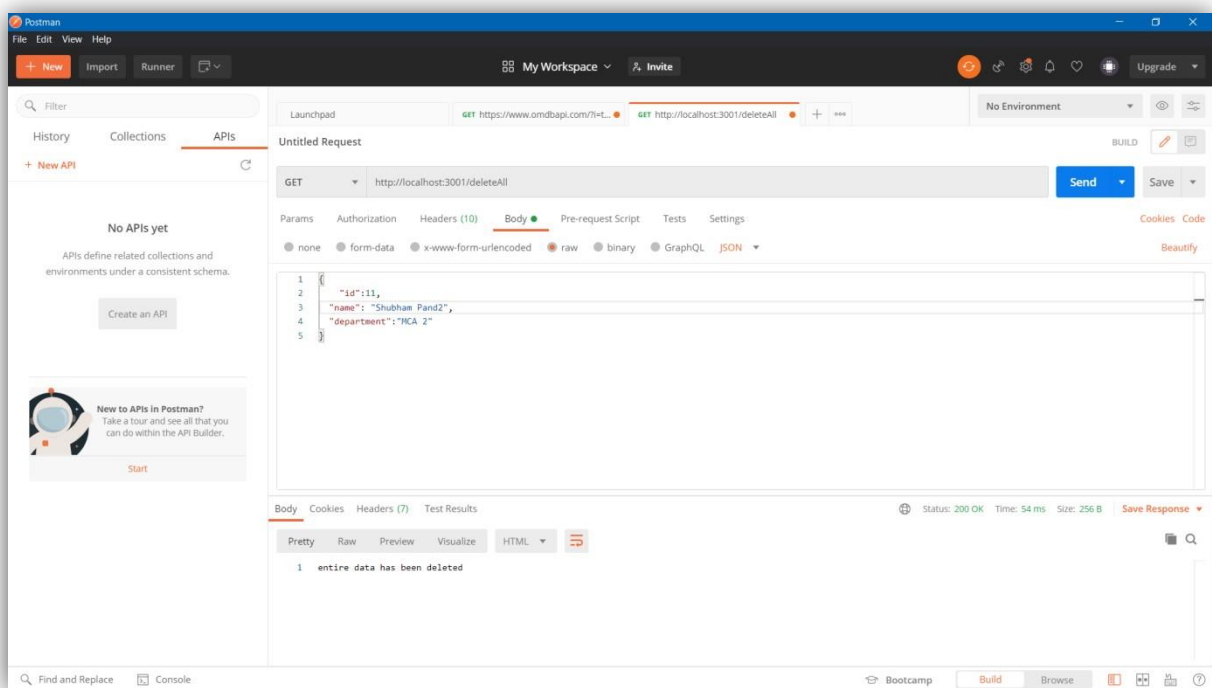
```
{
  "_id": 10,
  "name": "Chaitanya Shetty",
  "department": "MCA 2",
  "_v": 0
}
```

System Status: All Good
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Delete All





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Enter ID to delete