Assignment: Data Access

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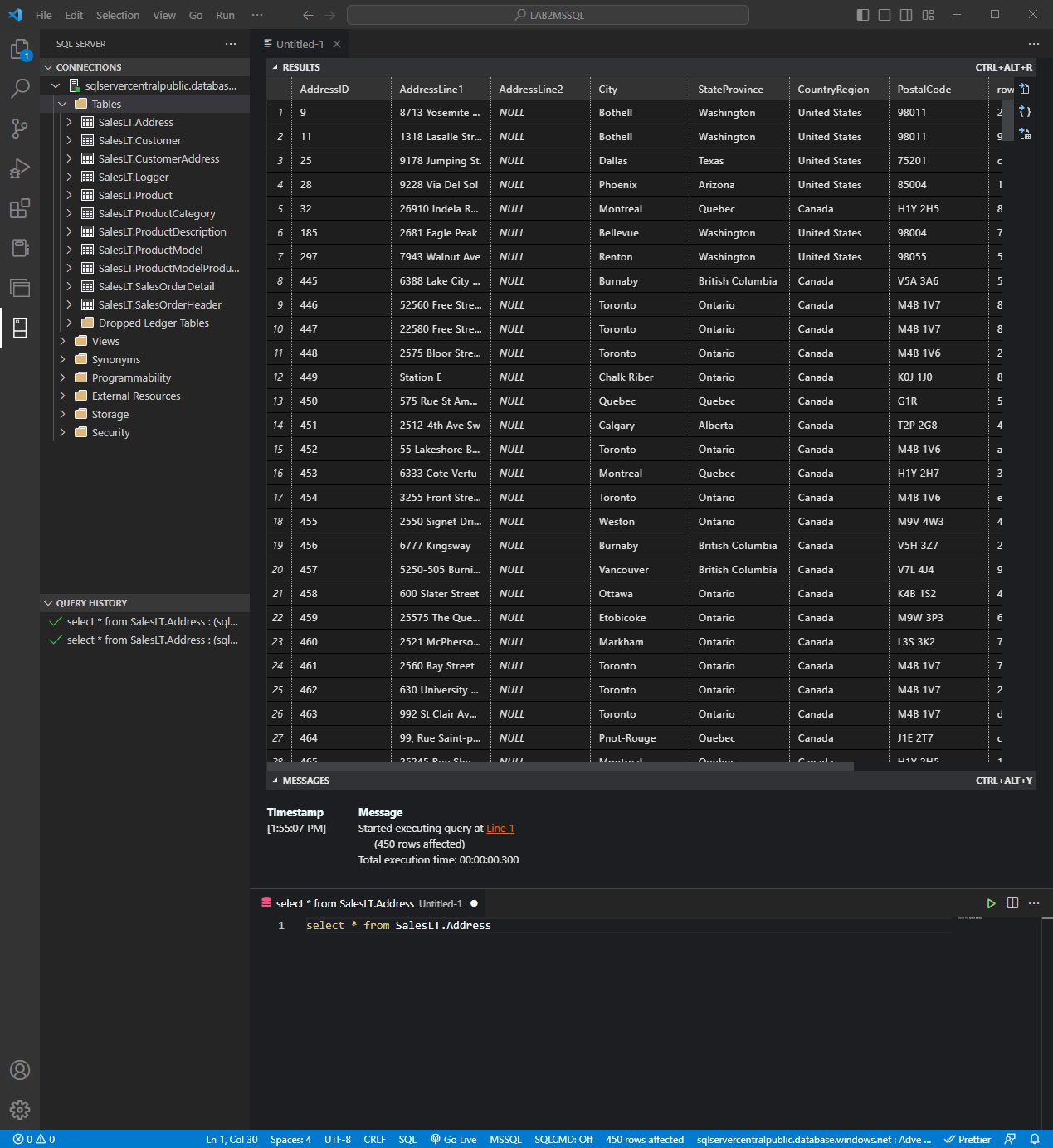
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IFT 458: Middleware Programming & Database Security

Professor Dinesh Sthapit

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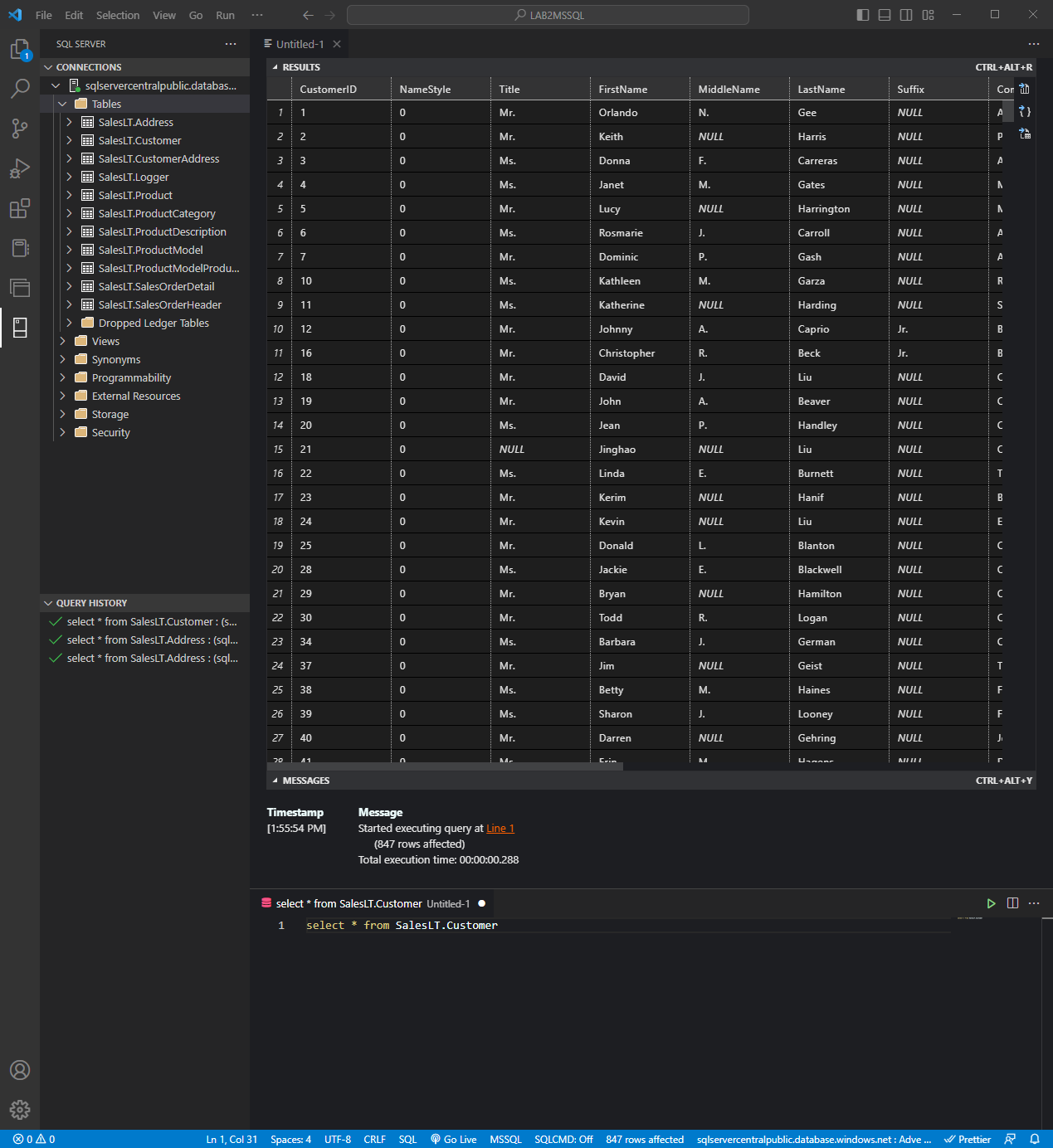
**Proof of connection and SELECT statement 1**

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*Code:*

select \* from SalesLT.Address

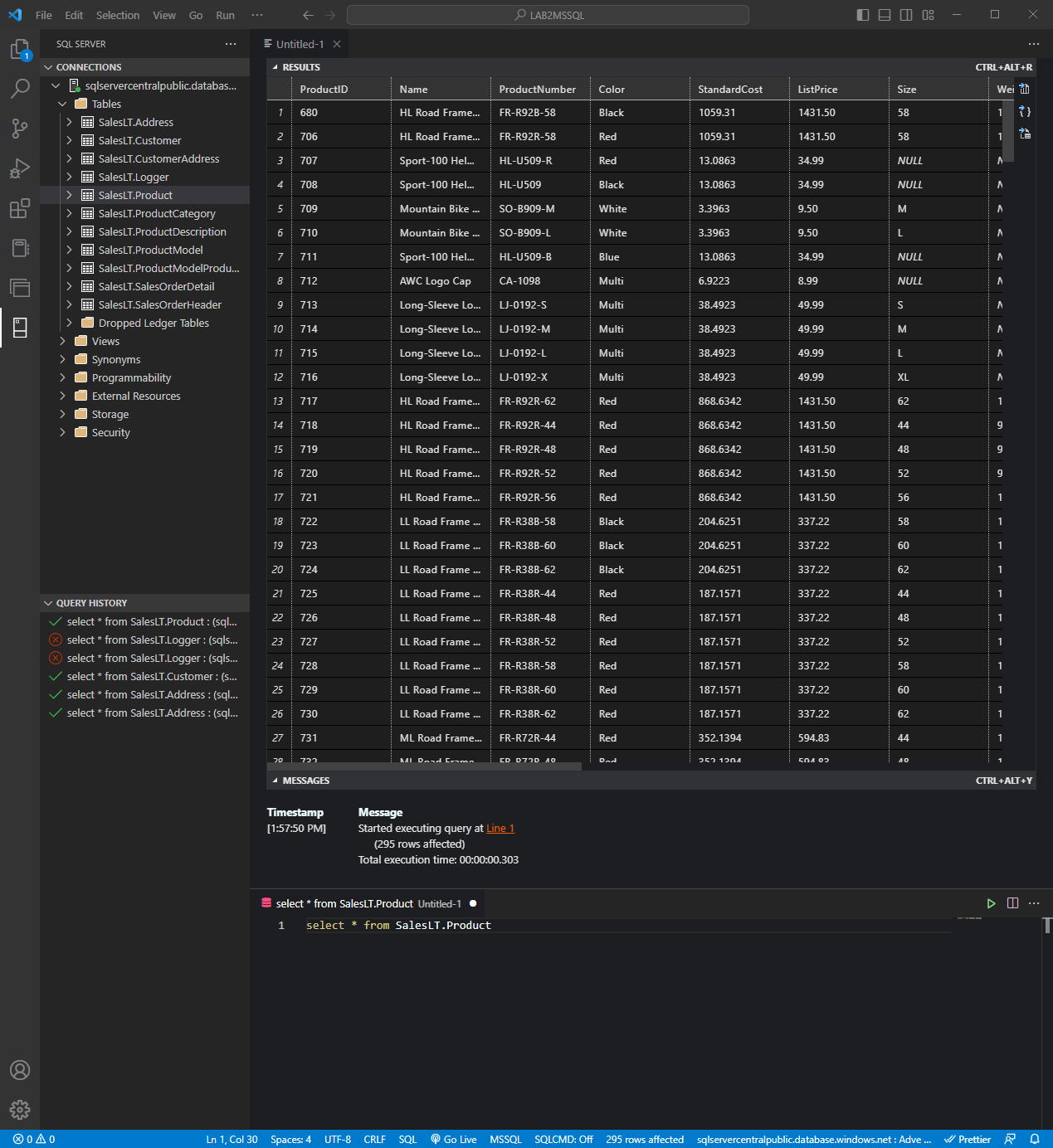
**Proof of connection and SELECT statement 2**

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*Code:*

select \* from SalesLT.Customer

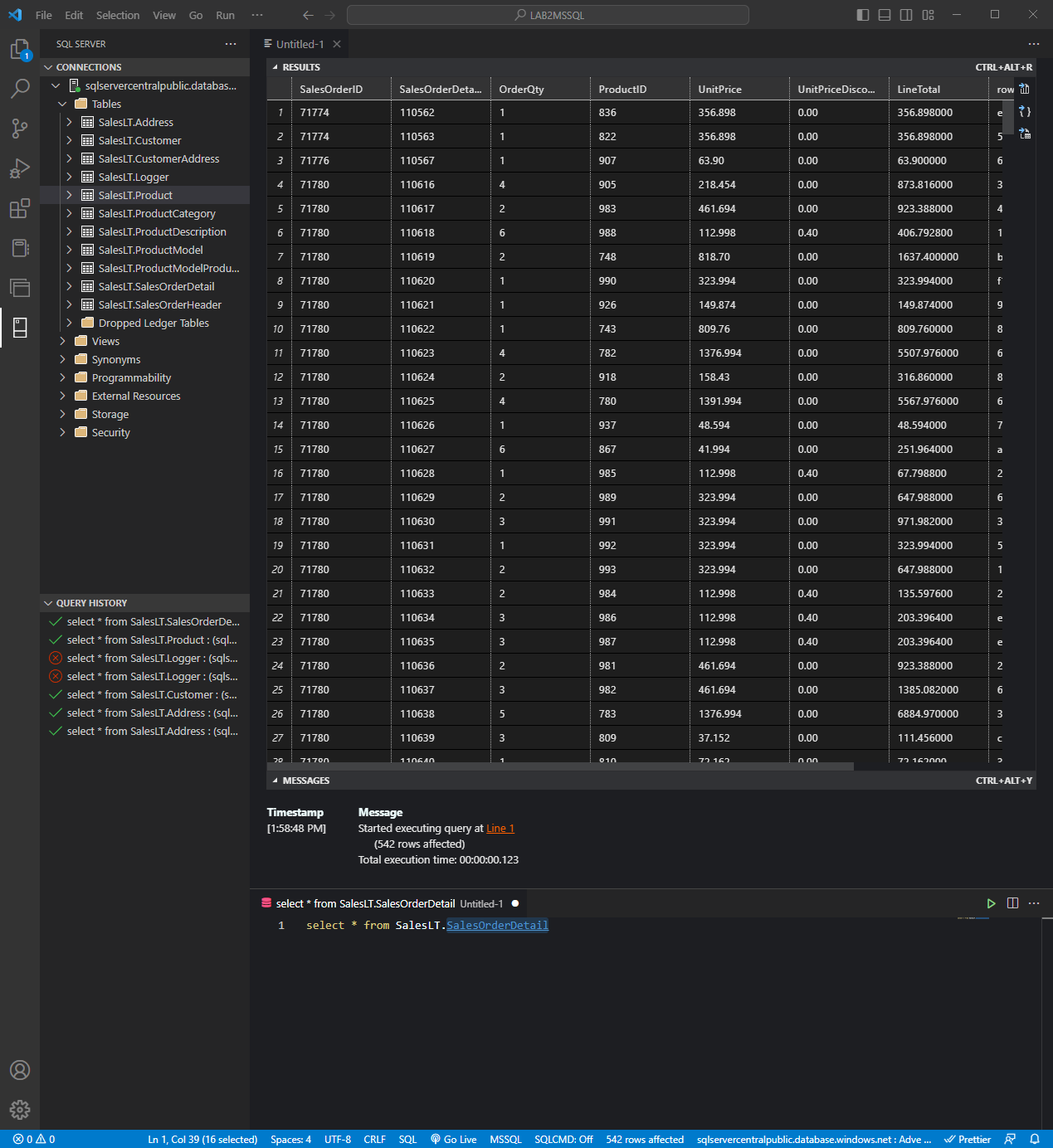
**Proof of connection and SELECT statement 3**

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*Code:*

select \* from SalesLT.Product

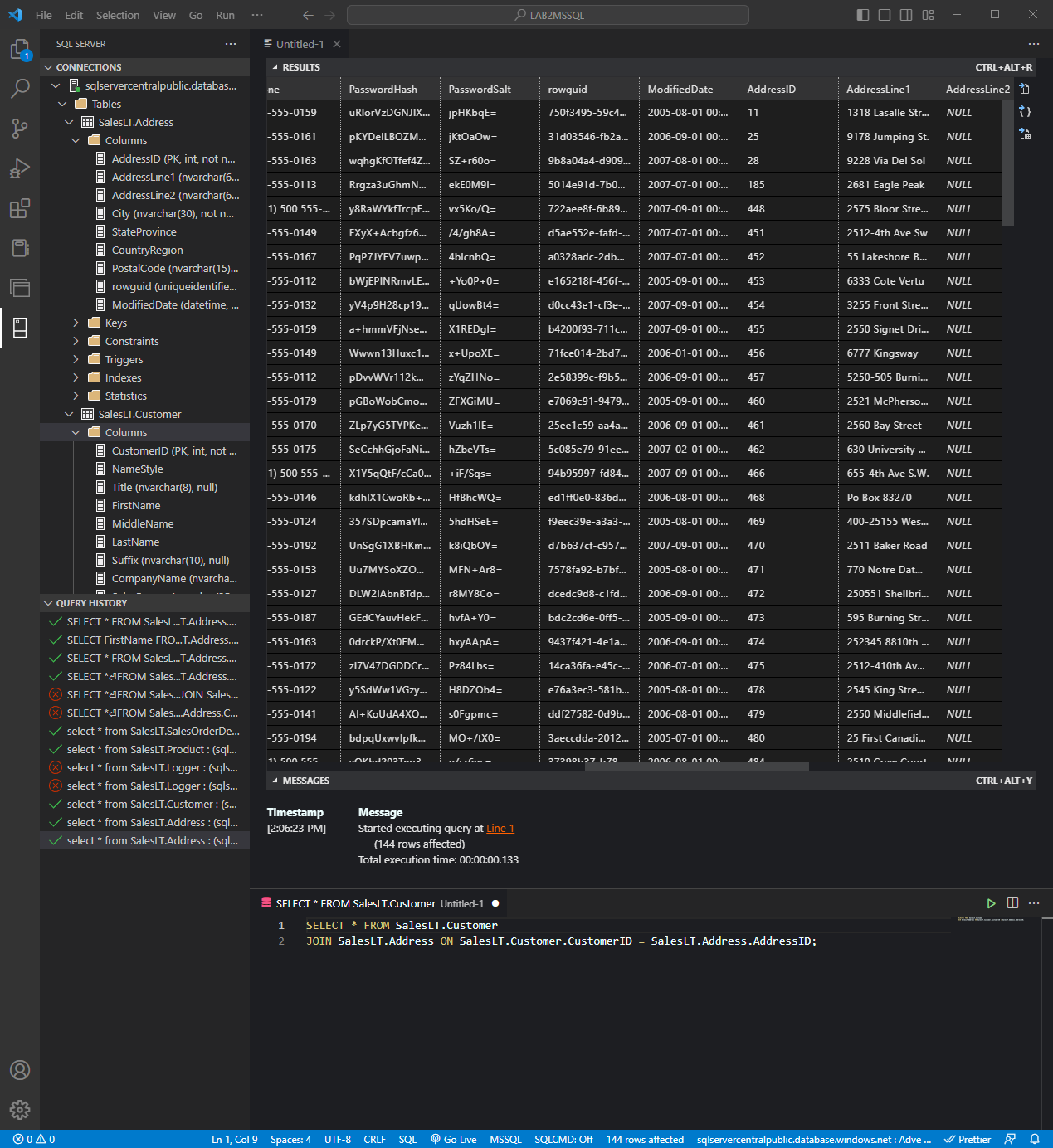
**Proof of connection and SELECT statement 4**

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*Code:*

select \* from SalesLT.SalesOrderDetail

**JOIN statement**

****

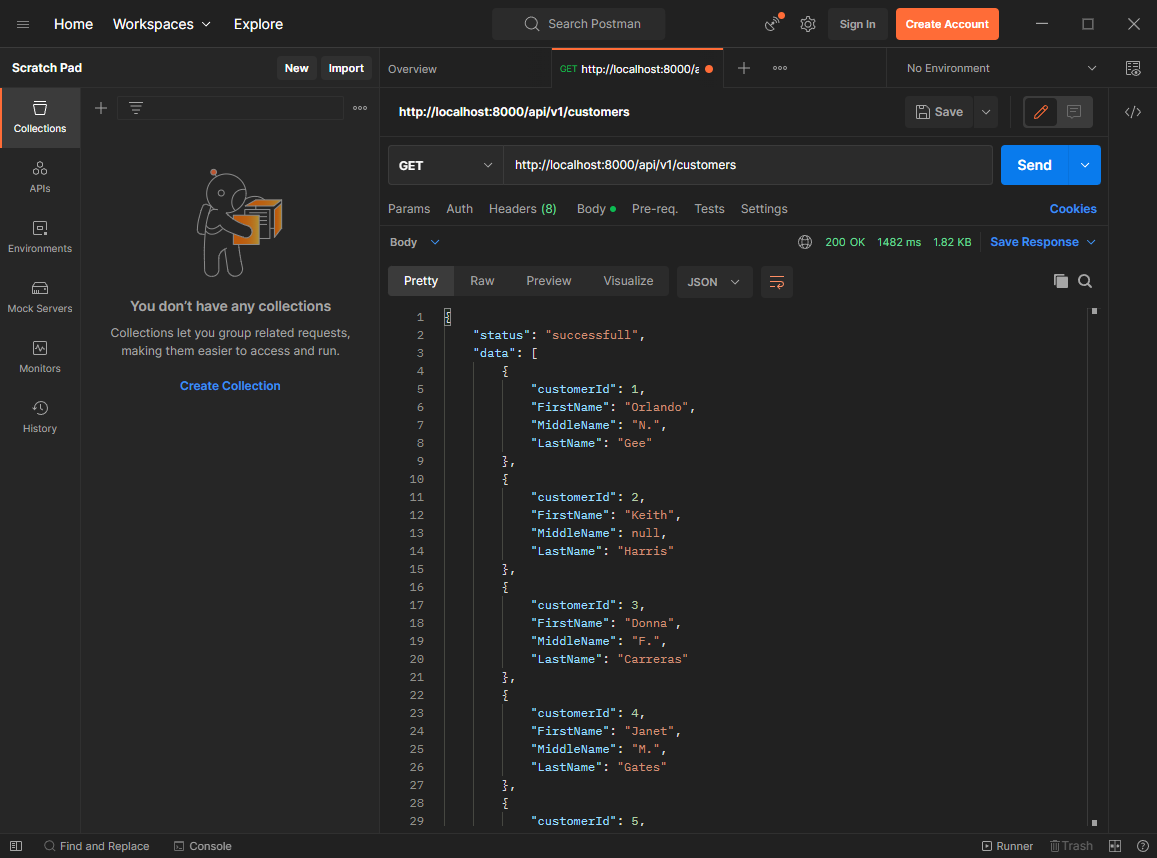
*Code:*

SELECT \* FROM SalesLT.Customer

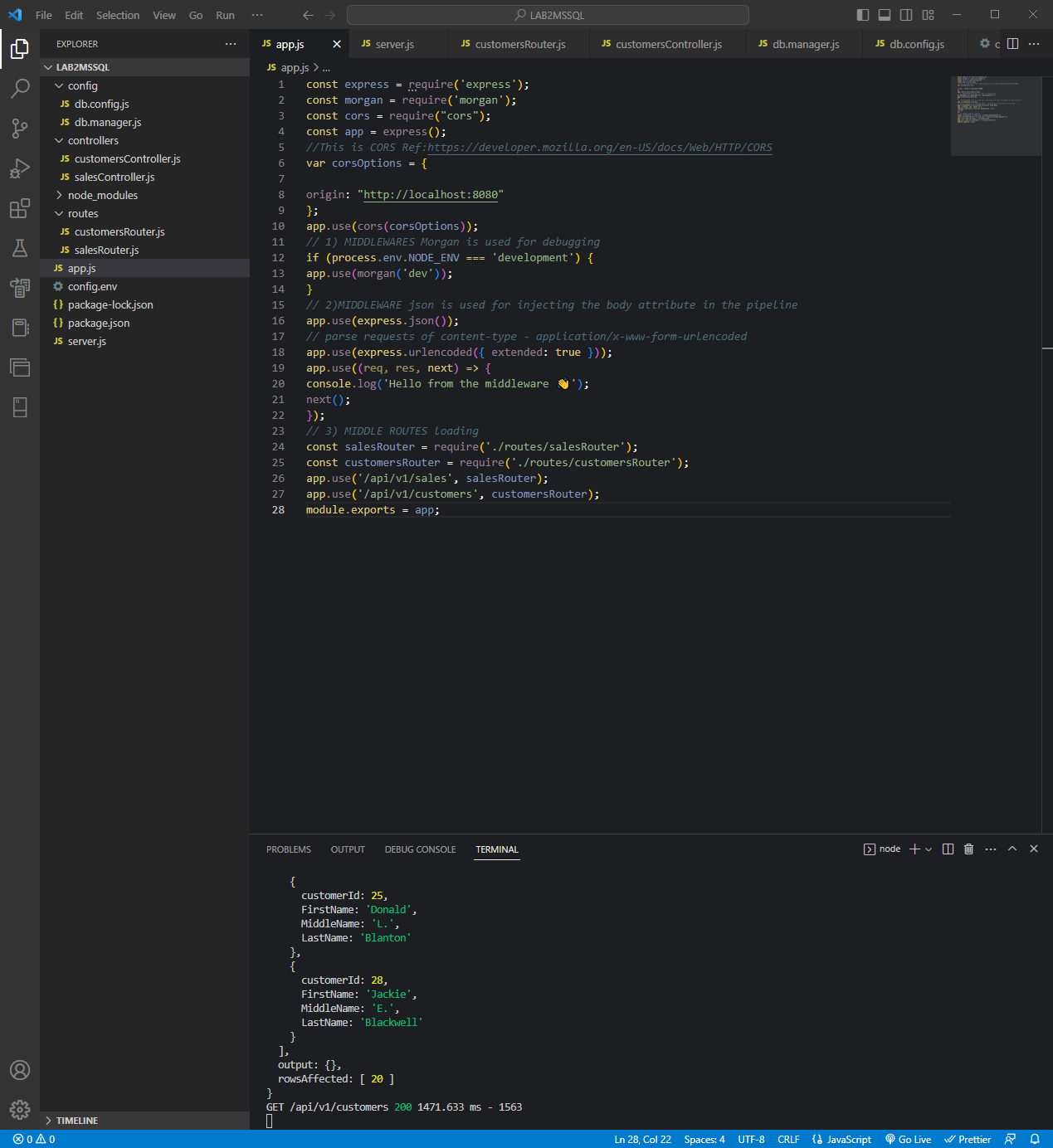
JOIN SalesLT.Address ON SalesLT.Customer.CustomerID = SalesLT.Address.AddressID;

**Step 6 - Create a Customers Resources, Routes and Controllers…**

*GET customers from Postman:*

**

*app.js:*

**

*Code:*

const express = require('express');

const morgan = require('morgan');

const cors = require("cors");

const app = express();

*//This is CORS Ref:https://developer.mozilla.org/en-US/docs/Web/HTTP/CORS*

var corsOptions = {

origin: "http://localhost:8080"

};

app.use(cors(corsOptions));

*// 1) MIDDLEWARES Morgan is used for debugging*

if (process.env.NODE\_ENV === 'development') {

app.use(morgan('dev'));

}

*// 2)MIDDLEWARE json is used for injecting the body attribute in the pipeline*

app.use(express.json());

*// parse requests of content-type - application/x-www-form-urlencoded*

app.use(express.urlencoded({ extended: true }));

app.use((req, res, next) => {

console.log('Hello from the middleware 👋');

next();

});

*// 3) MIDDLE ROUTES loading*

const salesRouter = require('./routes/salesRouter');

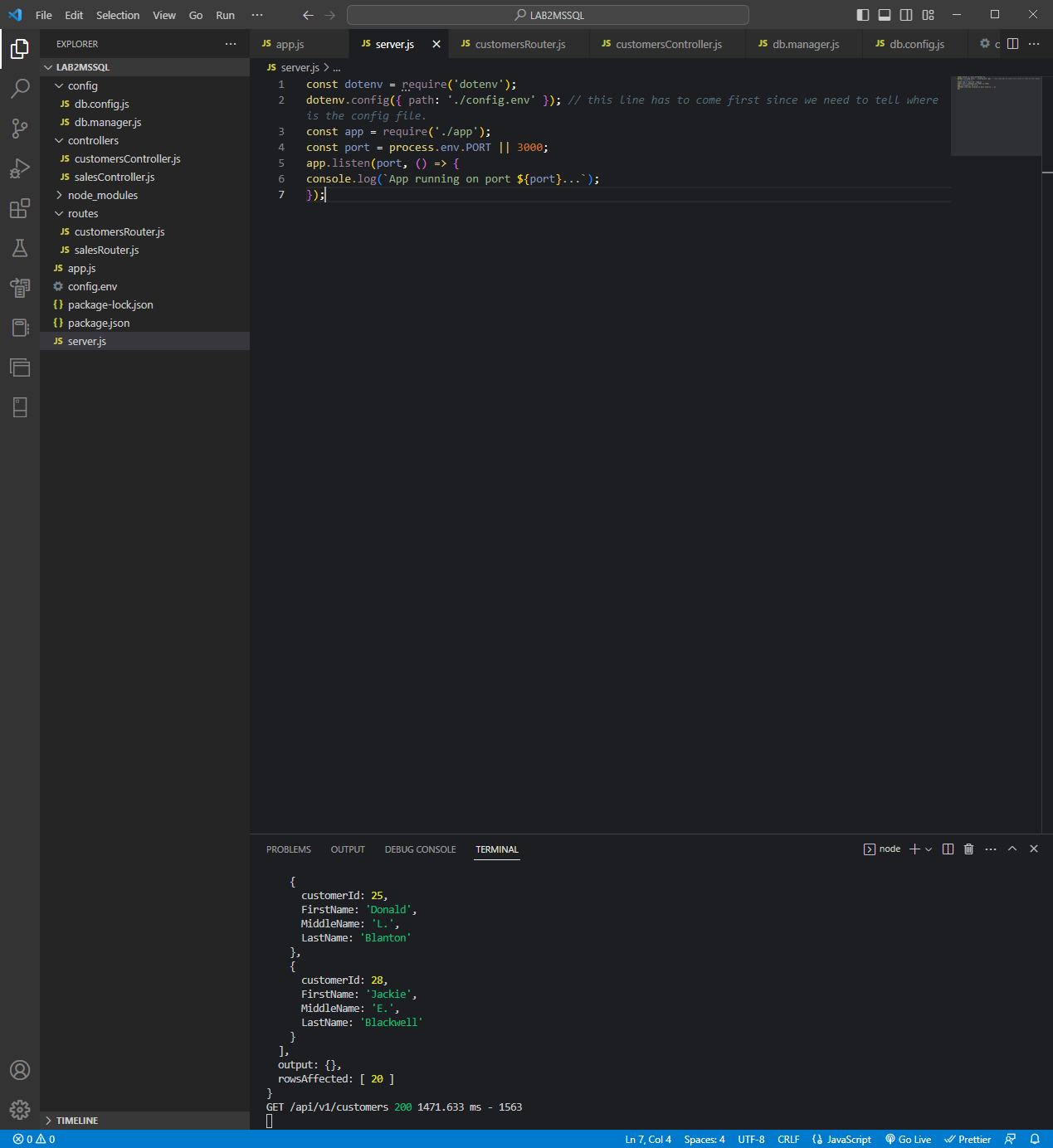
const customersRouter = require('./routes/customersRouter');

app.use('/api/v1/sales', salesRouter);

app.use('/api/v1/customers', customersRouter);

module.exports = app;

*server.js:*

**

*Code:*

const dotenv = require('dotenv');

dotenv.config({ path: './config.env' }); *// this line has to come first since we need to tell where is the config file.*

const app = require('./app');

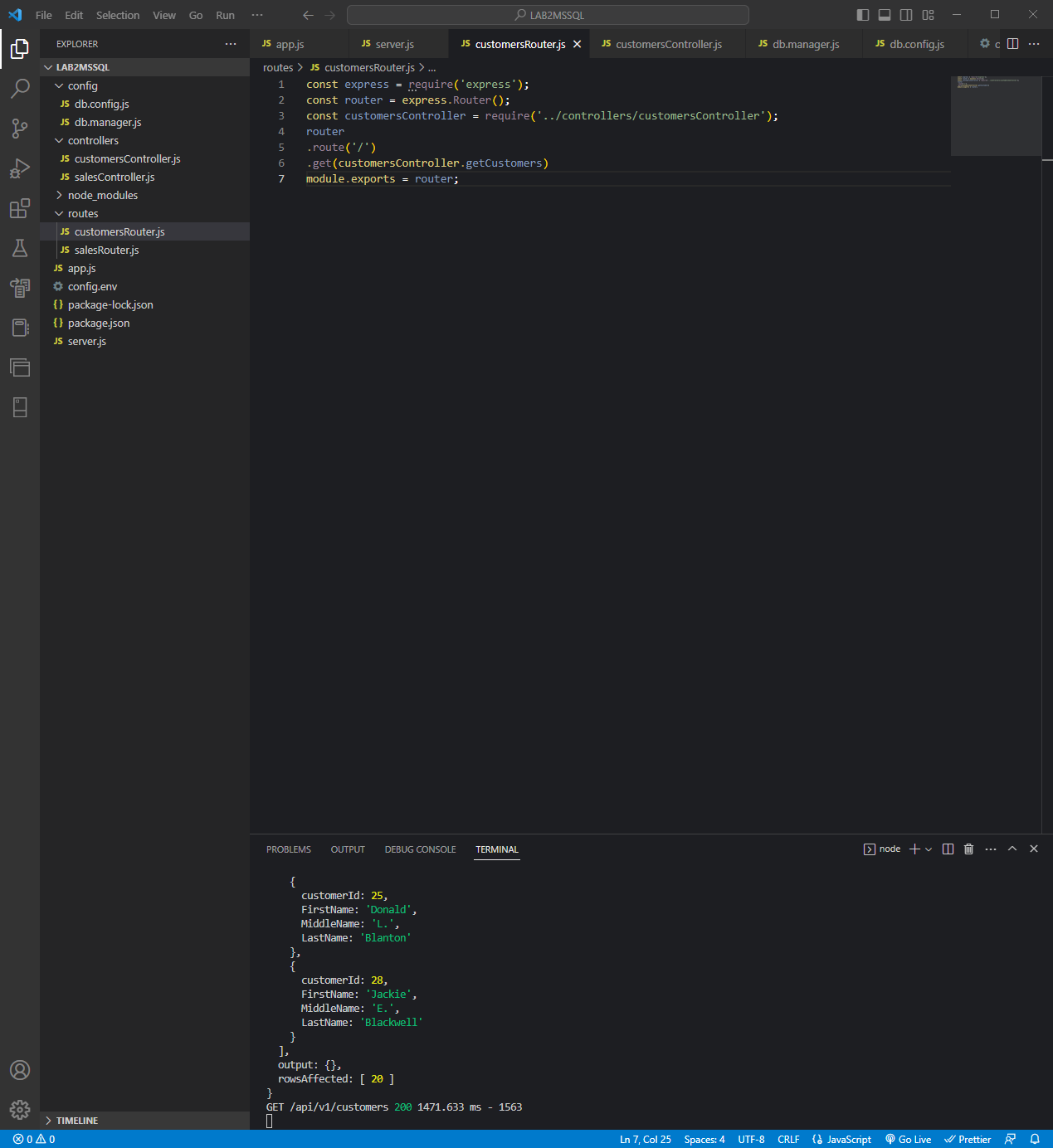
const port = process.env.PORT || 3000;

app.listen(port, () => {

console.log(`App running on port ${port}...`);

});

*customerRouter.js:*

**

*Code:*

const express = require('express');

const router = express.Router();

const customersController = require('../controllers/customersController');

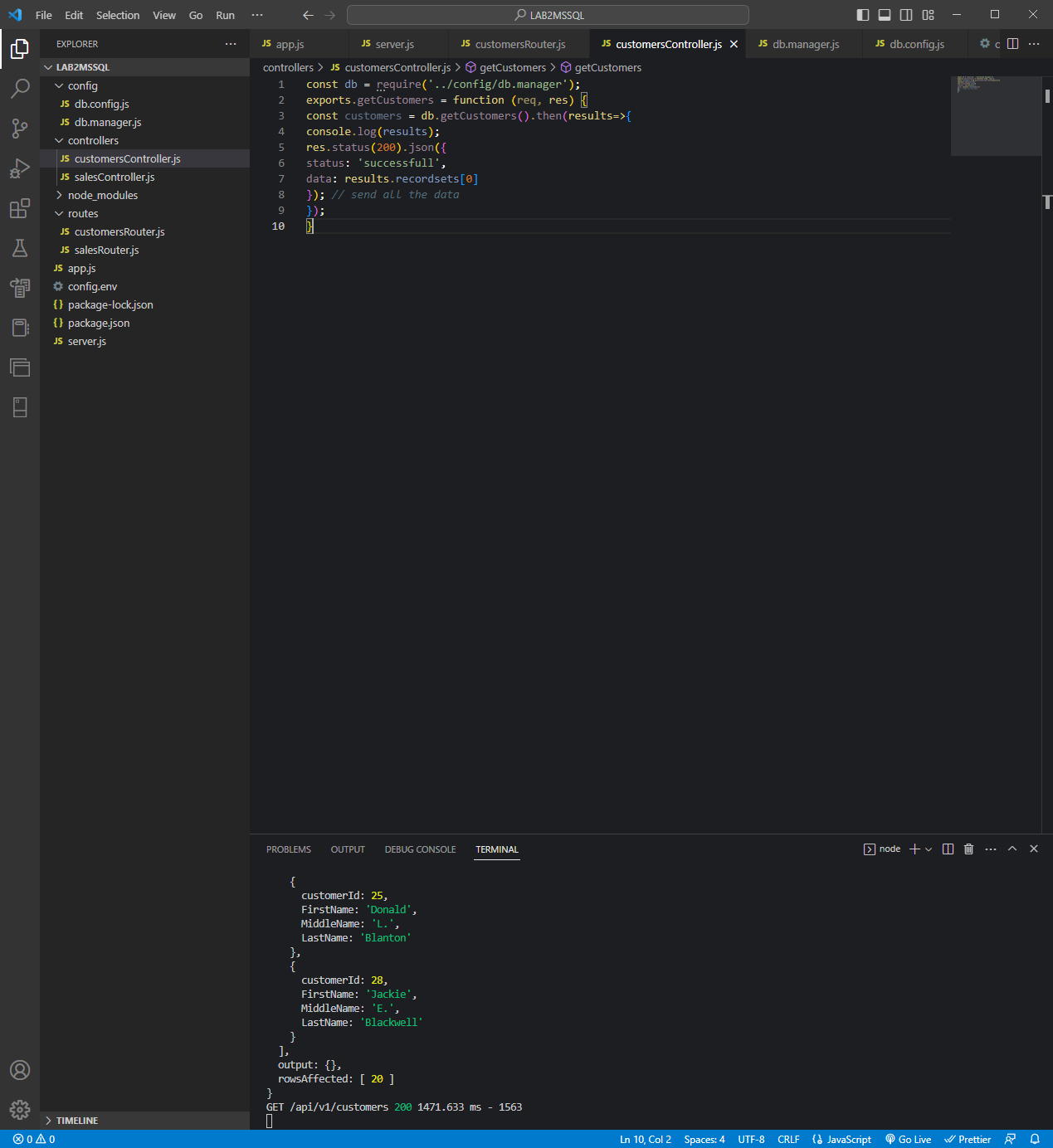
router

.route('/')

.get(customersController.getCustomers)

module.exports = router;

*customersController.js:*

**

*Code:*

const db = require('../config/db.manager');

exports.getCustomers = function (req, res) {

const customers = db.getCustomers().then(results=>{

console.log(results);

res.status(200).json({

status: 'successfull',

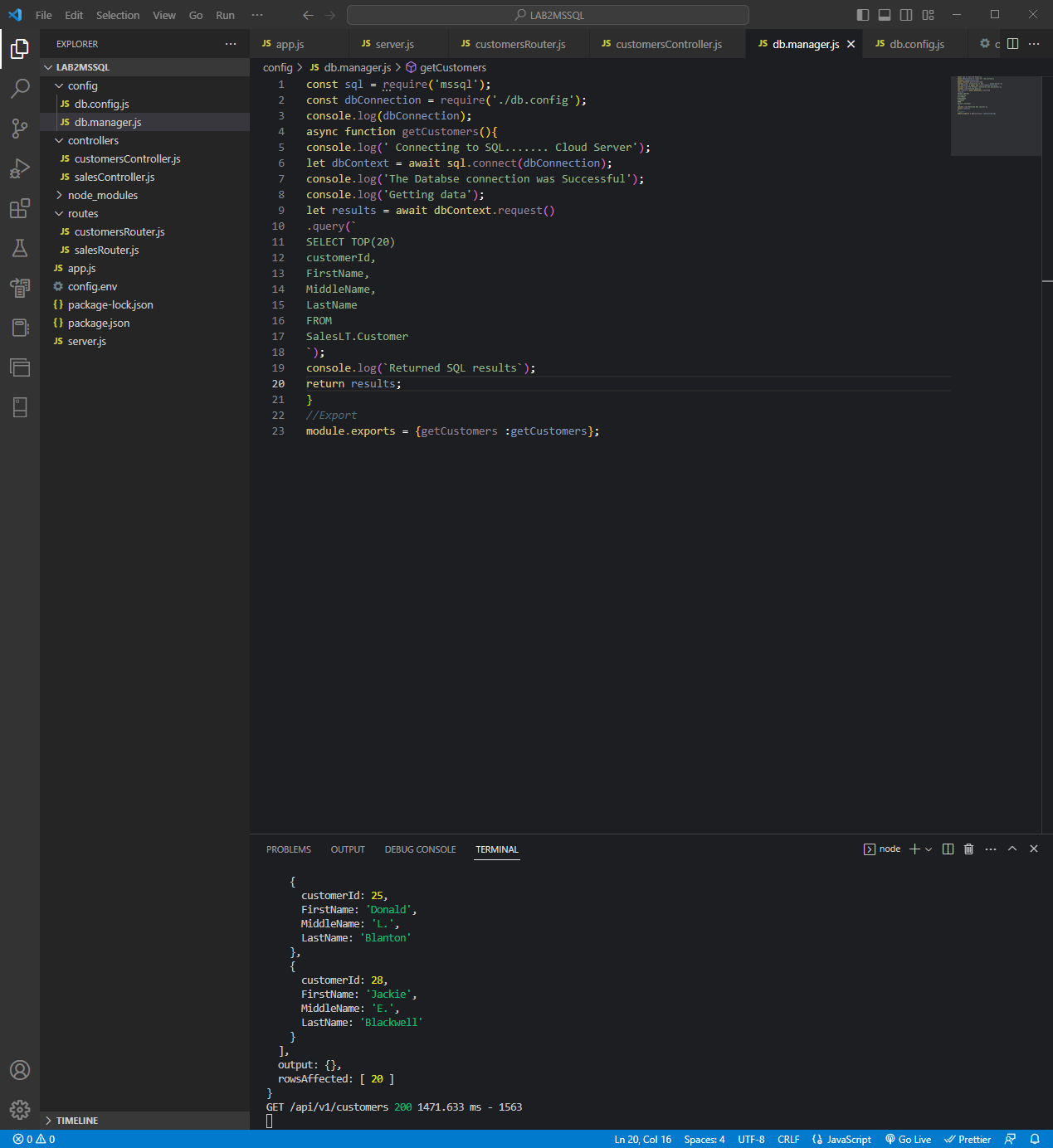
data: results.recordsets[0]

}); *// send all the data*

});

}

*db.manager.js:*

**

*Code:*

const sql = require('mssql');

const dbConnection = require('./db.config');

console.log(dbConnection);

async function getCustomers(){

console.log(' Connecting to SQL....... Cloud Server');

let dbContext = await sql.connect(dbConnection);

console.log('The Databse connection was Successful');

console.log('Getting data');

let results = await dbContext.request()

.query(`

SELECT TOP(20)

customerId,

FirstName,

MiddleName,

LastName

FROM

SalesLT.Customer

`);

console.log(`Returned SQL results`);

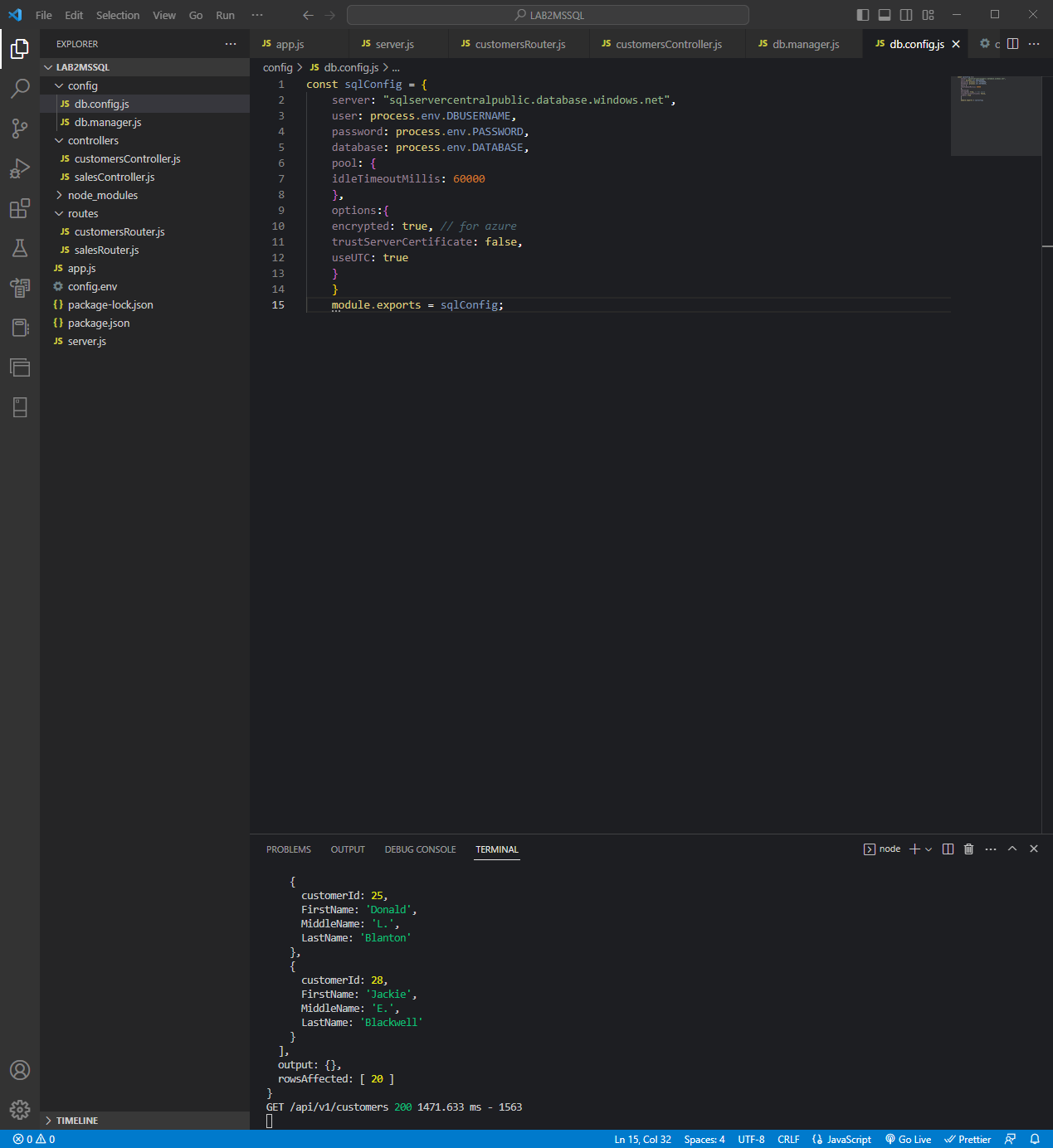
return results;

}

*//Export*

module.exports = {getCustomers :getCustomers};

*db.config.js:*

**

*Code:*

const sqlConfig = {

    server: "sqlservercentralpublic.database.windows.net",

    user: process.env.DBUSERNAME,

    password: process.env.PASSWORD,

    database: process.env.DATABASE,

    pool: {

    idleTimeoutMillis: 60000

    },

    options:{

    encrypted: true, *// for azure*

    trustServerCertificate: false,

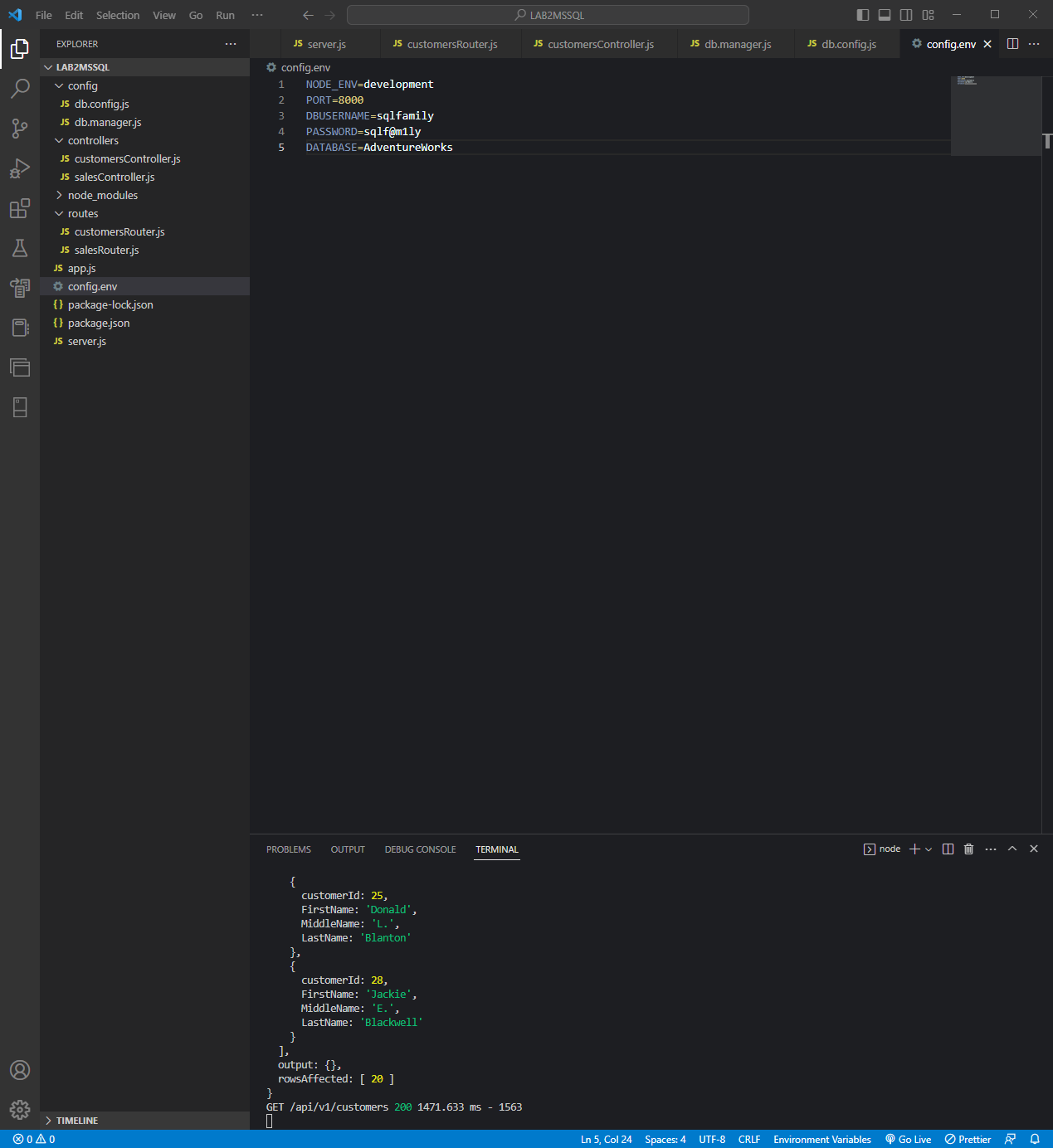
    useUTC: true

    }

    }

    module.exports = sqlConfig;

*config.env:*

**

*Code:*

NODE\_ENV=development

PORT=8000

DBUSERNAME=sqlfamily

PASSWORD=sqlf@m1ly

DATABASE=AdventureWorks