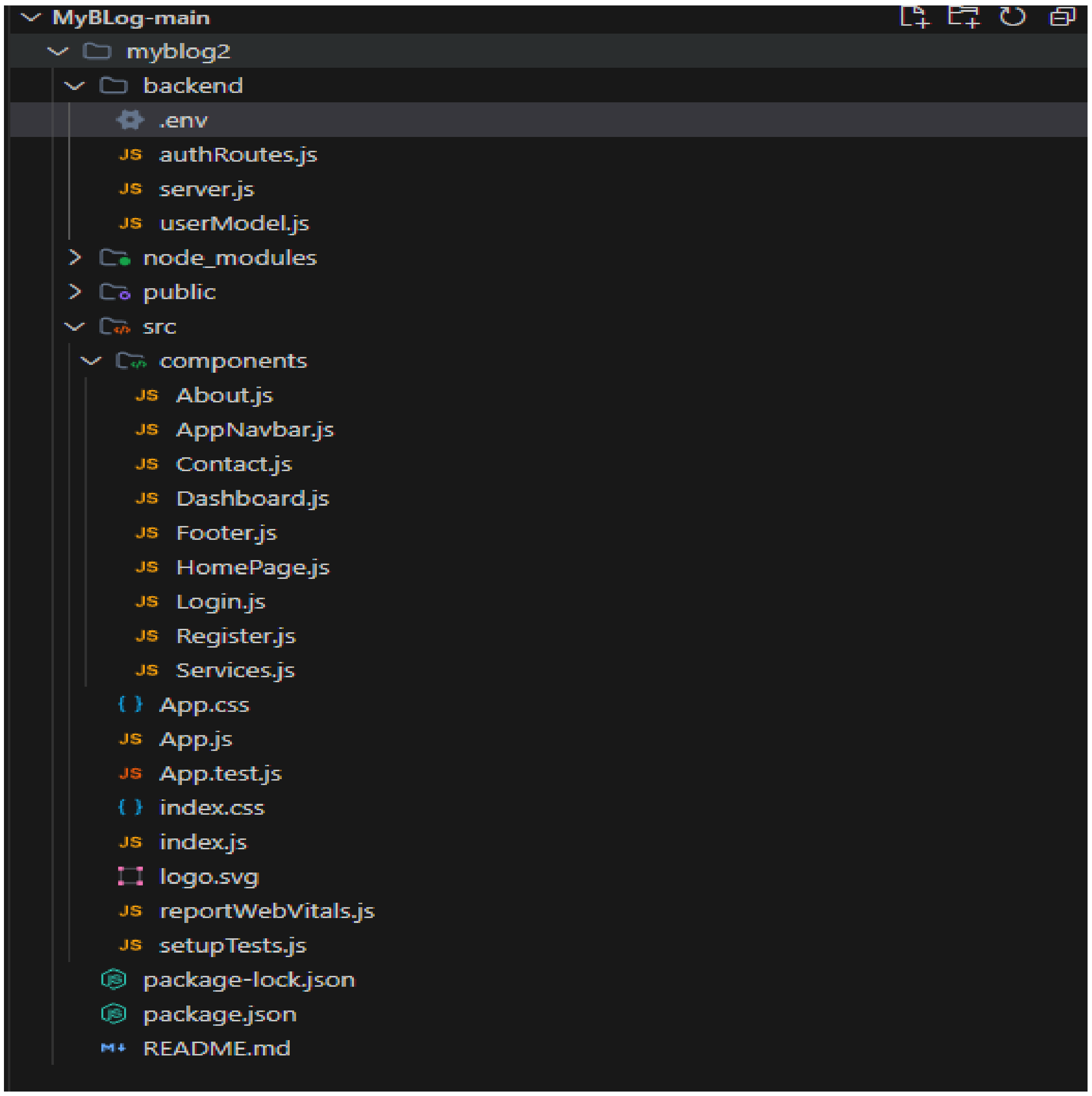
Team Leader Name: JAY ARRE TALOSIG
Members: ALEXANDER D. CASTILLO, TRISTAN JAY O. SALAMAT, MARK JHOSHUA G. TABERNA, CHARLES MEDIO

Subject & Section: CTINASSL – COM231
Professor: Mr. Gaudencio Jeffrey G. Romano

Lab Activity #2: BUILD and Run the backend (Express + Mongoose)

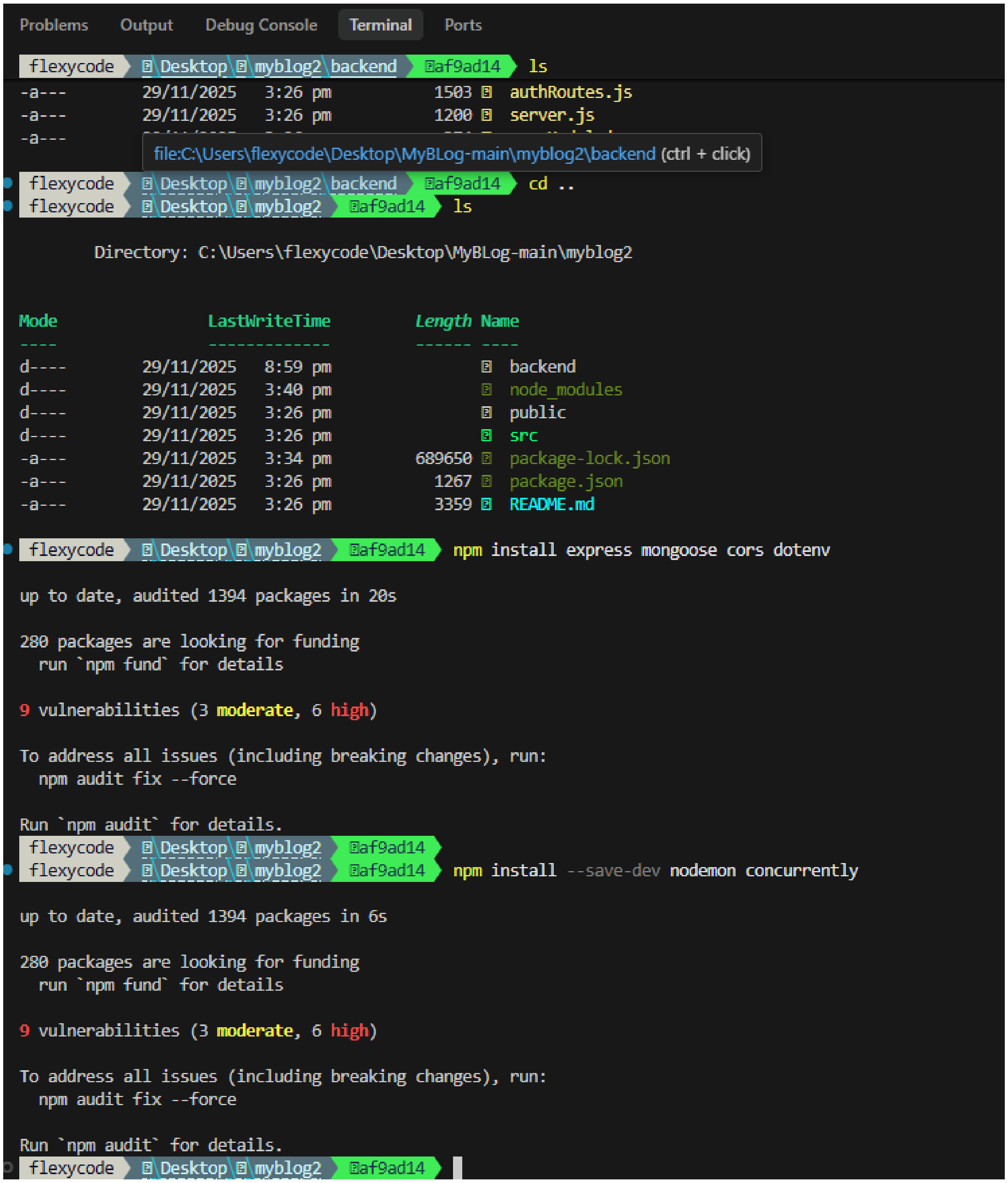
Screenshot of Overall backend (Express + Mongoose) :

1. Project structure



```
MyBLog-main
  myblog2
    backend
      .env
      authRoutes.js
      server.js
      userModel.js
    node_modules
    public
    src
      components
        About.js
        AppNavbar.js
        Contact.js
        Dashboard.js
        Footer.js
        HomePage.js
        Login.js
        Register.js
        Services.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logo.svg
      reportWebVitals.js
      setupTests.js
    package-lock.json
    package.json
    README.md
```

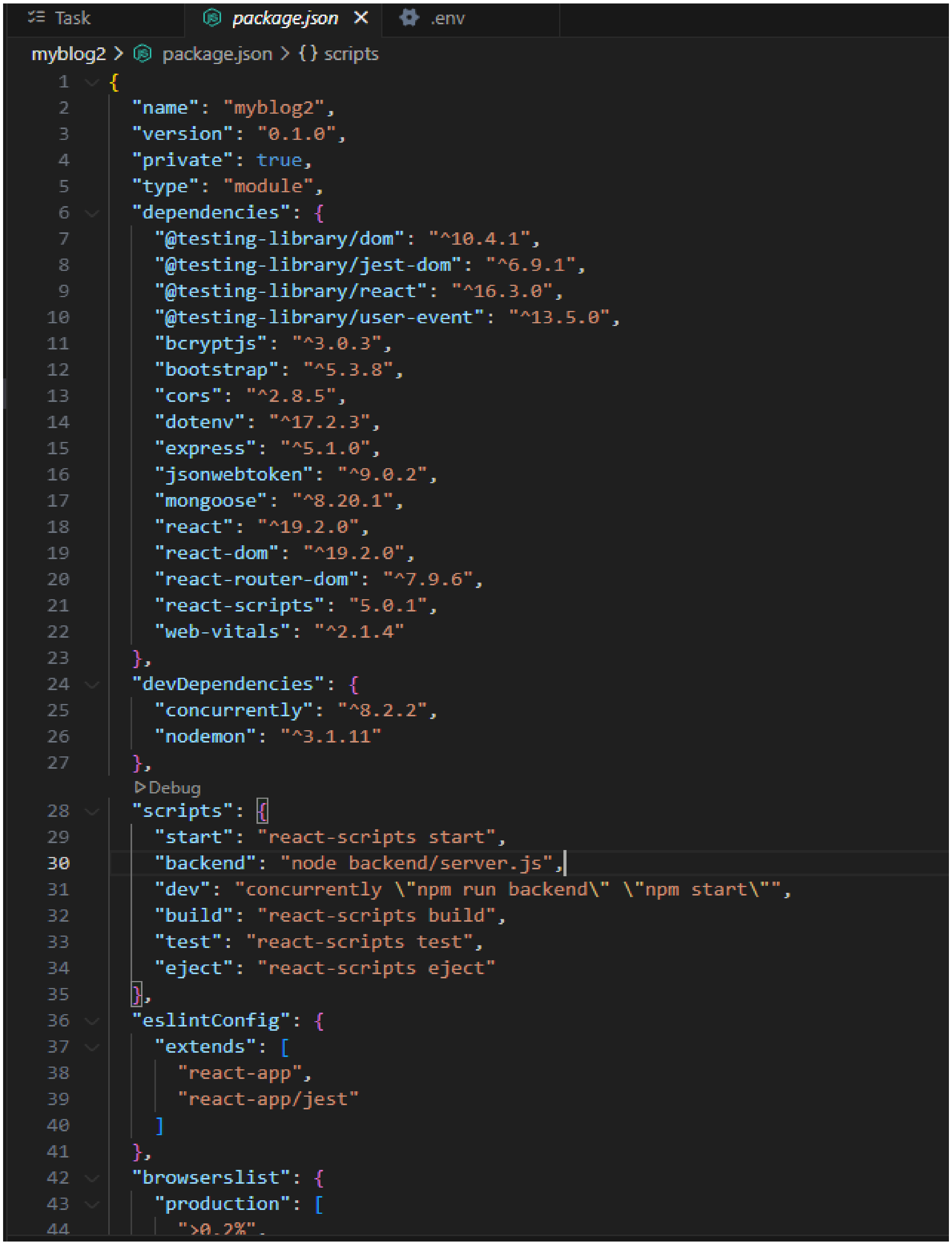
2. Install dependencies



Problems   Output   Debug Console   Terminal   Ports

```
flexycode  Desktop\ myblog2\backend  af9ad14  ls
-a---         29/11/2025   3:26 pm           1503   authRoutes.js
-a---         29/11/2025   3:26 pm           1200   server.js
-a---
          file:C:\Users\flexycode\Desktop\MyBLog-main\myblog2\backend (ctrl + click)
flexycode  Desktop\ myblog2\backend  af9ad14  cd ..
flexycode  Desktop\ myblog2  af9ad14  ls

        Directory: C:\Users\flexycode\Desktop\MyBLog-main\myblog2


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d----         29/11/2025   8:59 pm                 backend
d----         29/11/2025   3:40 pm                 node_modules
d----         29/11/2025   3:26 pm                 public
d----         29/11/2025   3:26 pm                 src
-a---         29/11/2025   3:34 pm         689650  package-lock.json
-a---         29/11/2025   3:26 pm           1267  package.json
-a---         29/11/2025   3:26 pm           3359  README.md

flexycode  Desktop\ myblog2  af9ad14  npm install express mongoose cors dotenv

up to date, audited 1394 packages in 20s

280 packages are looking for funding
  run `npm fund` for details

9 vulnerabilities (3 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
flexycode  Desktop\ myblog2  af9ad14
flexycode  Desktop\ myblog2  af9ad14  npm install --save-dev nodemon concurrently

up to date, audited 1394 packages in 6s

280 packages are looking for funding
  run `npm fund` for details

9 vulnerabilities (3 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
flexycode  Desktop\ myblog2  af9ad14
```

3. Package.json scripts

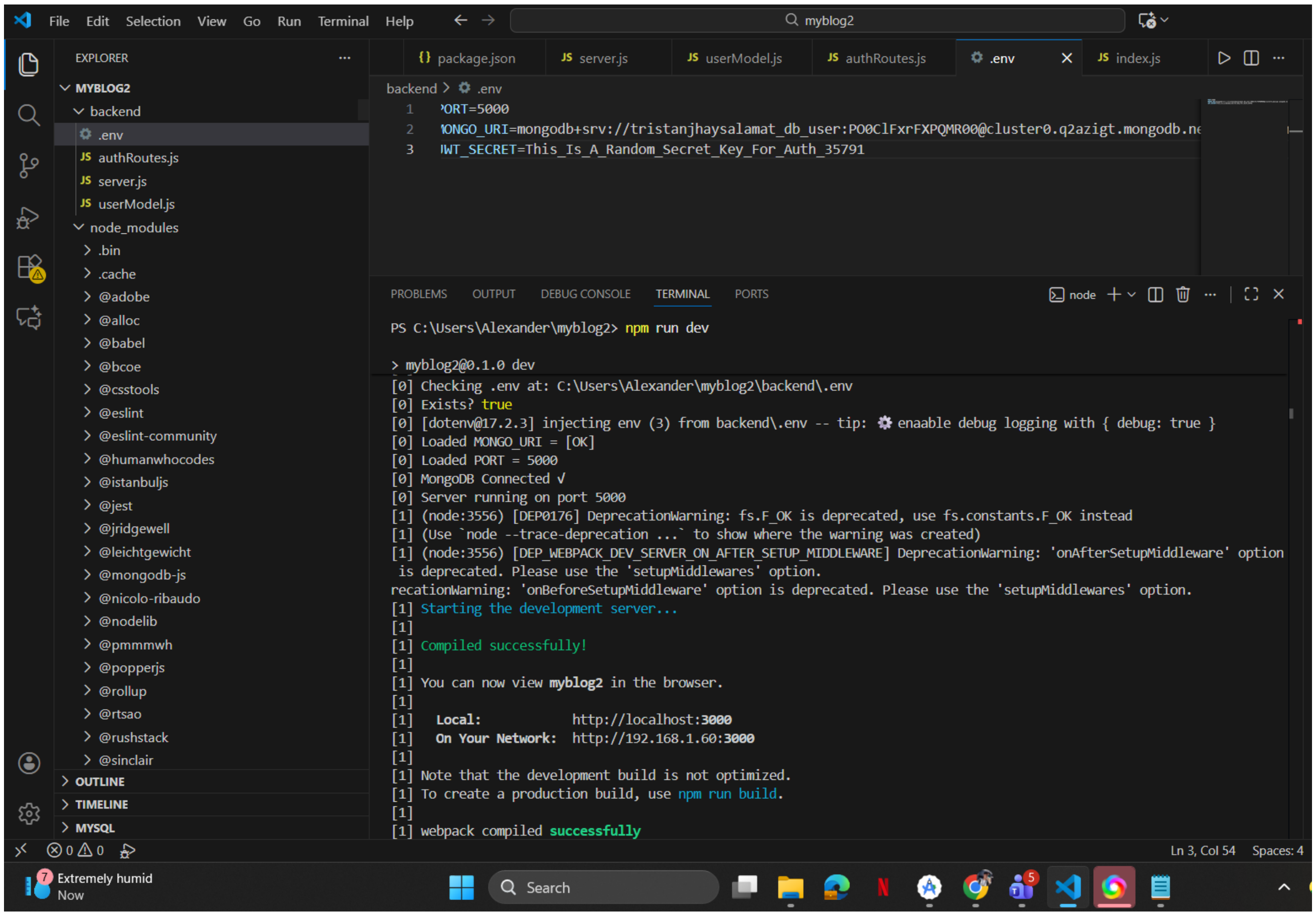


Task   package.json ×   .env

myblog2 > package.json > {} scripts

```
{
  "name": "myblog2",
  "version": "0.1.0",
  "private": true,
  "type": "module",
  "dependencies": {
    "@testing-library/dom": "^10.4.1",
    "@testing-library/jest-dom": "^6.9.1",
    "@testing-library/react": "^16.3.0",
    "@testing-library/user-event": "^13.5.0",
    "bcryptjs": "^3.0.3",
    "bootstrap": "^5.3.8",
    "cors": "^2.8.5",
    "dotenv": "^17.2.3",
    "express": "^5.1.0",
    "jsonwebtoken": "^9.0.2",
    "mongoose": "^8.20.1",
    "react": "^19.2.0",
    "react-dom": "^19.2.0",
    "react-router-dom": "^7.9.6",
    "react-scripts": "5.0.1",
    "web-vitals": "^2.1.4"
  },
  "devDependencies": {
    "concurrently": "^8.2.2",
    "nodemon": "^3.1.11"
  },
  ▷Debug
  "scripts": {
    "start": "react-scripts start",
    "backend": "node backend/server.js",
    "dev": "concurrently \"npm run backend\" \"npm start\"",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": [
      "react-app",
      "react-app/jest"
    ]
  },
  "browserslist": {
    "production": [
      ">0.2%",
```

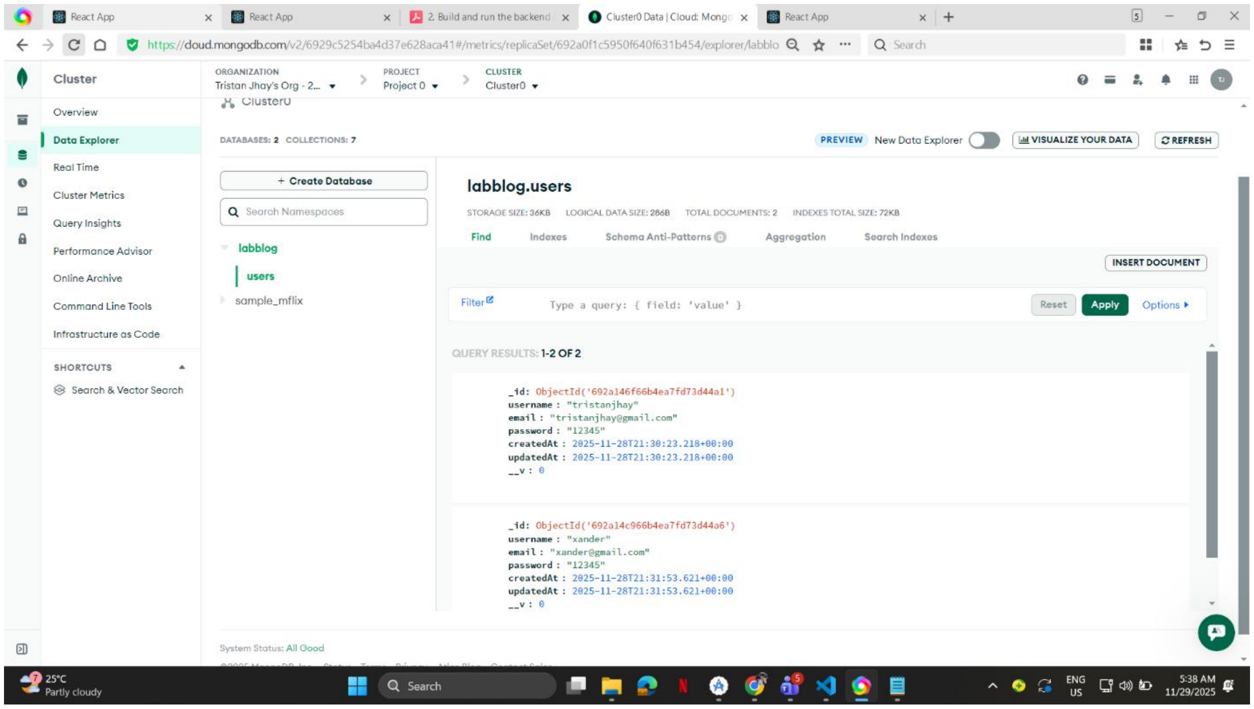
4. Backend .env file



```
ꟼORT=5000
IONGO_URI=mongodb+srv://tristanjhaysalamat_db_user:PO0ClFxrFXPQMR00@cluster0.q2azigt.mongodb.ne
IWT_SECRET=This_Is_A_Random_Secret_Key_For_Auth_35791
```

```
PS C:\Users\Alexander\myblog2> npm run dev

> myblog2@0.1.0 dev
[0] Checking .env at: C:\Users\Alexander\myblog2\backend\.env
[0] Exists? true
[0] [dotenv@17.2.3] injecting env (3) from backend\.env -- tip: ⚙ enaable debug logging with { debug: true }
[0] Loaded MONGO_URI = [OK]
[0] Loaded PORT = 5000
[0] MongoDB Connected √
[0] Server running on port 5000
[1] (node:3556) [DEP0176] DeprecationWarning: fs.F_OK is deprecated, use fs.constants.F_OK instead
[1] (Use `node --trace-deprecation ...` to show where the warning was created)
[1] (node:3556) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option
 is deprecated. Please use the 'setupMiddlewares' option.
recationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
[1] Starting the development server...
[1]
[1] Compiled successfully!
[1]
[1] You can now view myblog2 in the browser.
[1]
[1]   Local:            http://localhost:3000
[1]   On Your Network:  http://192.168.1.60:3000
[1]
[1] Note that the development build is not optimized.
[1] To create a production build, use npm run build.
[1]
[1] webpack compiled successfully
```

5. Allow IP access in MongoDB Atlas (0.0.0.0/0)

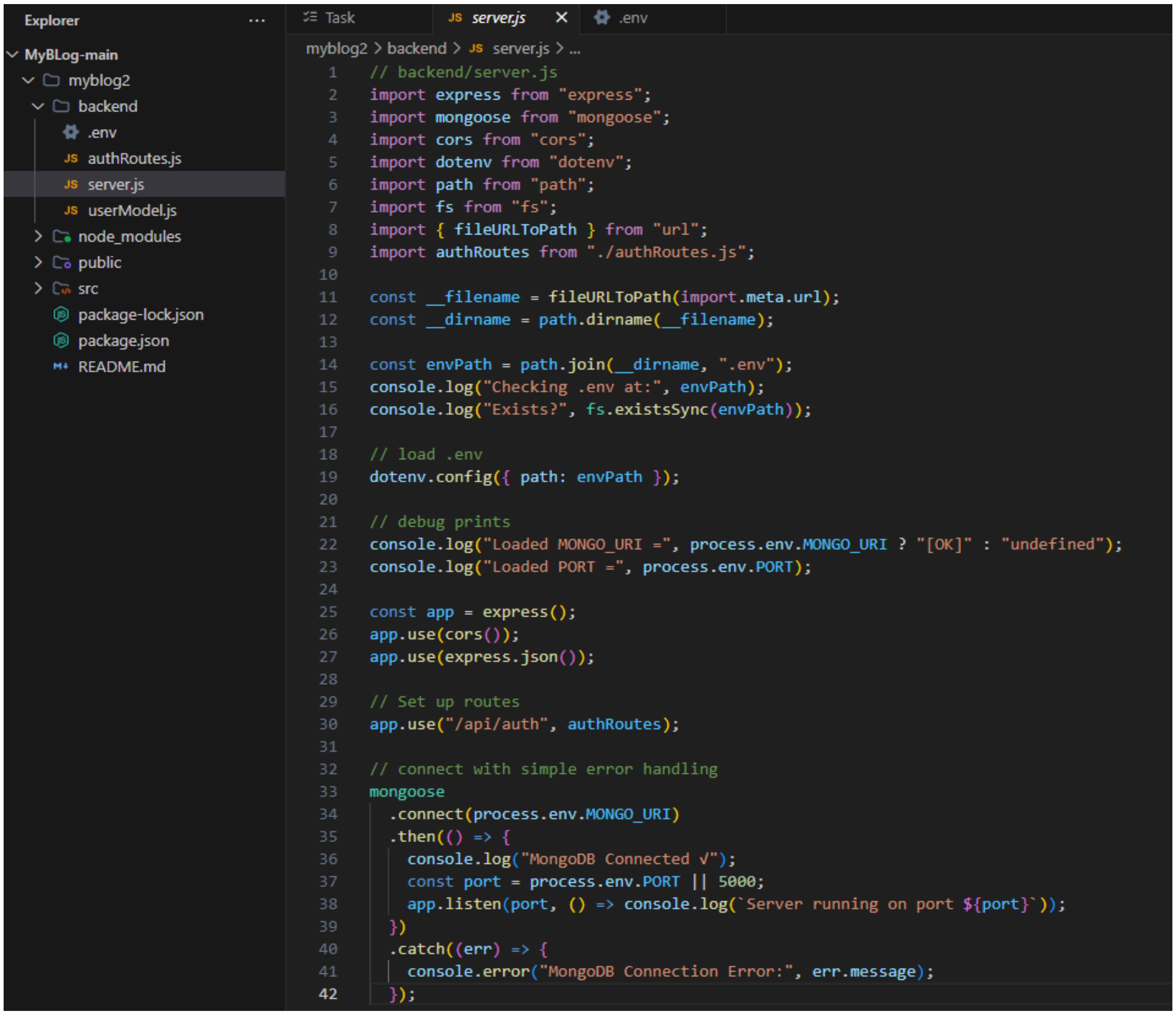


QUERY RESULTS: 1-2 OF 2

```
_id: ObjectId('692a146f66b4ea7fd73d44a1')
username : "tristanjhay"
email : "tristanjhay@gmail.com"
password : "12345"
createdAt : 2025-11-28T21:30:23.218+00:00
updatedAt : 2025-11-28T21:30:23.218+00:00
__v : 0
```

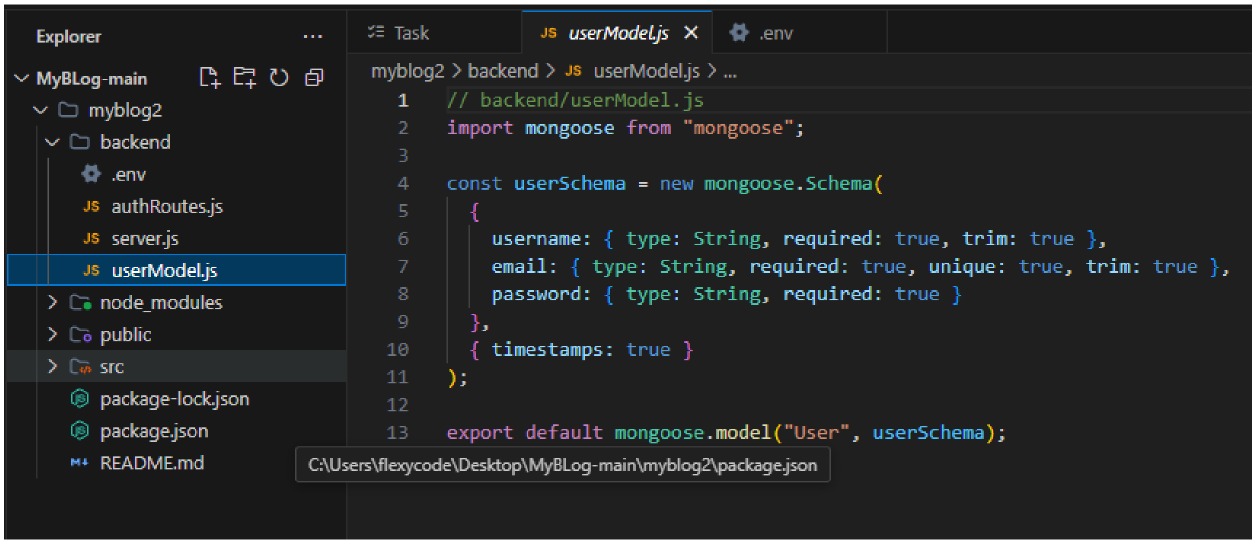
```
_id: ObjectId('692a14c966b4ea7fd73d44a6')
username : "xander"
email : "xander@gmail.com"
password : "12345"
createdAt : 2025-11-28T21:31:53.621+00:00
updatedAt : 2025-11-28T21:31:53.621+00:00
__v : 0
```

6. Server.js



```javascript
// backend/server.js
import express from "express";
import mongoose from "mongoose";
import cors from "cors";
import dotenv from "dotenv";
import path from "path";
import fs from "fs";
import { fileURLToPath } from "url";
import authRoutes from "./authRoutes.js";

const __filename = fileURLToPath(import.meta.url);
const __dirname = path.dirname(__filename);

const envPath = path.join(__dirname, ".env");
console.log("Checking .env at:", envPath);
console.log("Exists?", fs.existsSync(envPath));

// load .env
dotenv.config({ path: envPath });

// debug prints
console.log("Loaded MONGO_URI =", process.env.MONGO_URI ? "[OK]" : "undefined");
console.log("Loaded PORT =", process.env.PORT);

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

// Set up routes
app.use("/api/auth", authRoutes);

// connect with simple error handling
mongoose
  .connect(process.env.MONGO_URI)
  .then(() => {
    console.log("MongoDB Connected ✓");
    const port = process.env.PORT || 5000;
    app.listen(port, () => console.log(`Server running on port ${port}`));
  })
  .catch((err) => {
    console.error("MongoDB Connection Error:", err.message);
  });
```

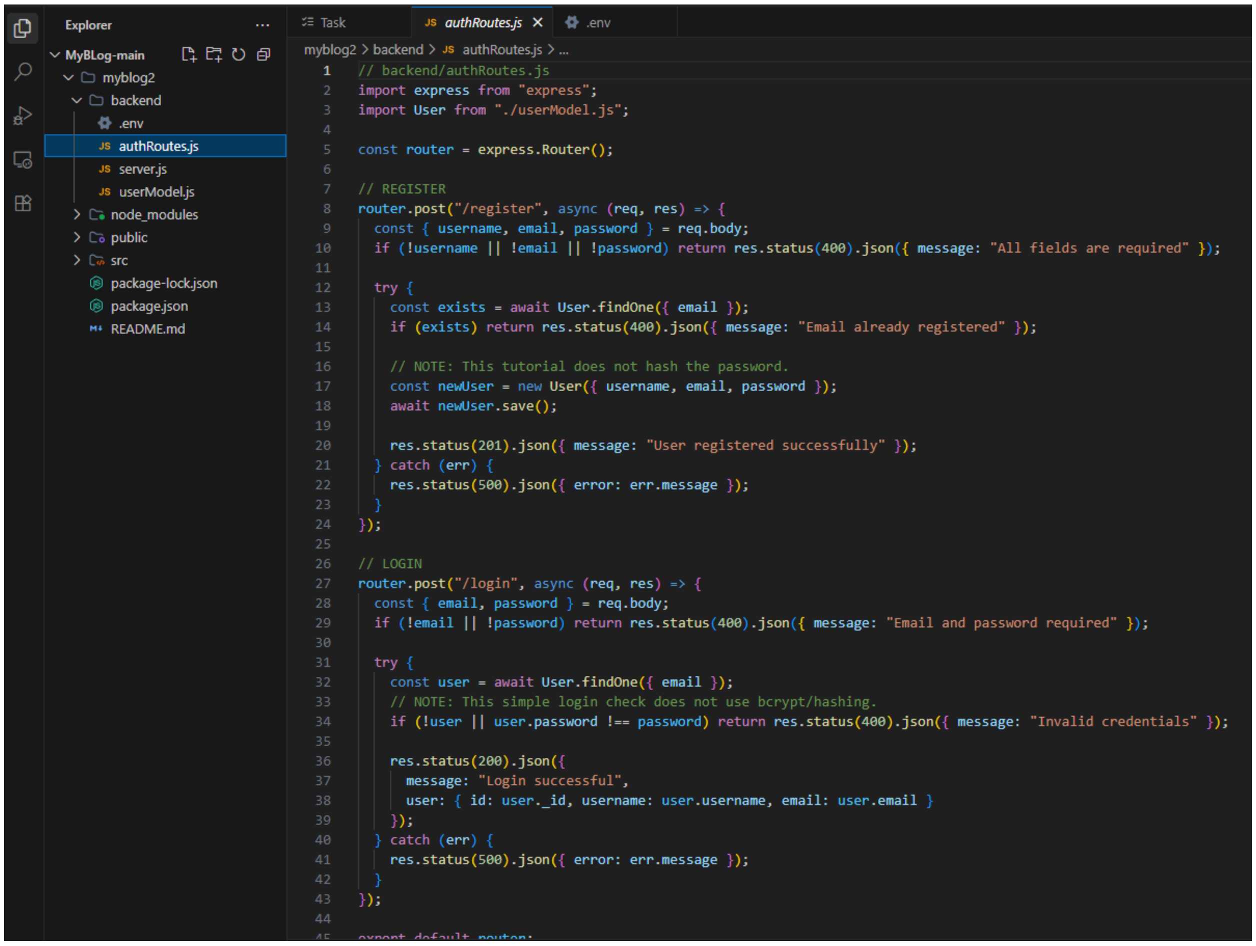
7. userModel.js



```
// backend/userModel.js
import mongoose from "mongoose";

const userSchema = new mongoose.Schema(
  {
    username: { type: String, required: true, trim: true },
    email: { type: String, required: true, unique: true, trim: true },
    password: { type: String, required: true }
  },
  { timestamps: true }
);

export default mongoose.model("User", userSchema);
```

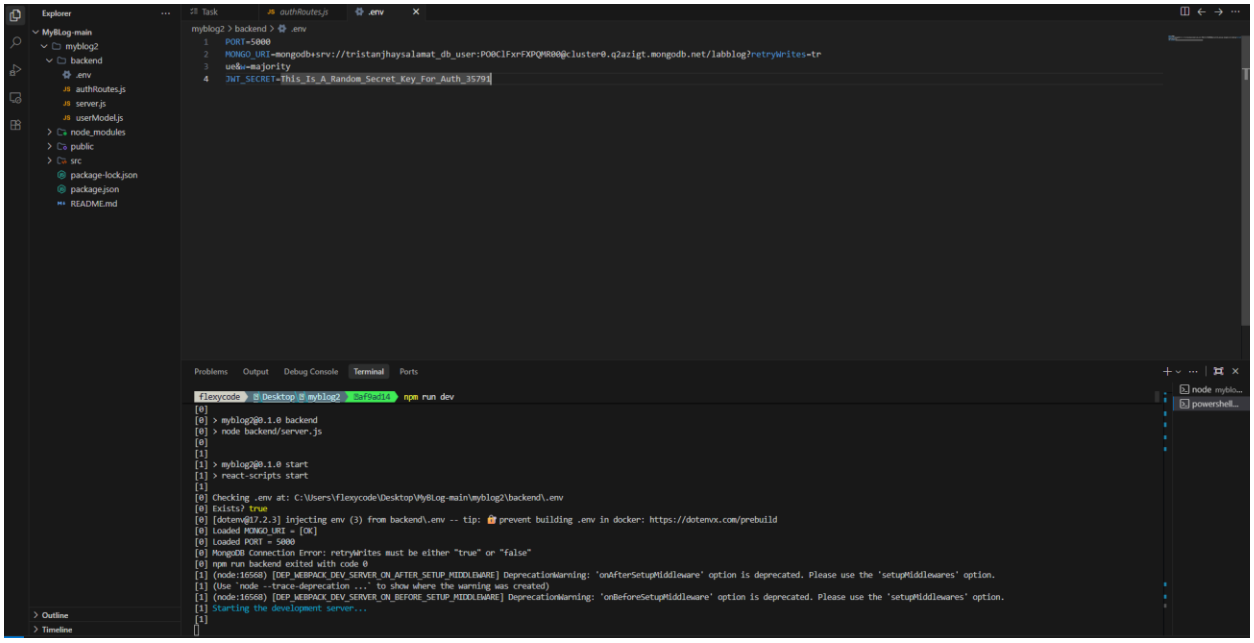
C:\Users\flexycode\Desktop\MyBLog-main\myblog2\package.json

8. authRoutes.js



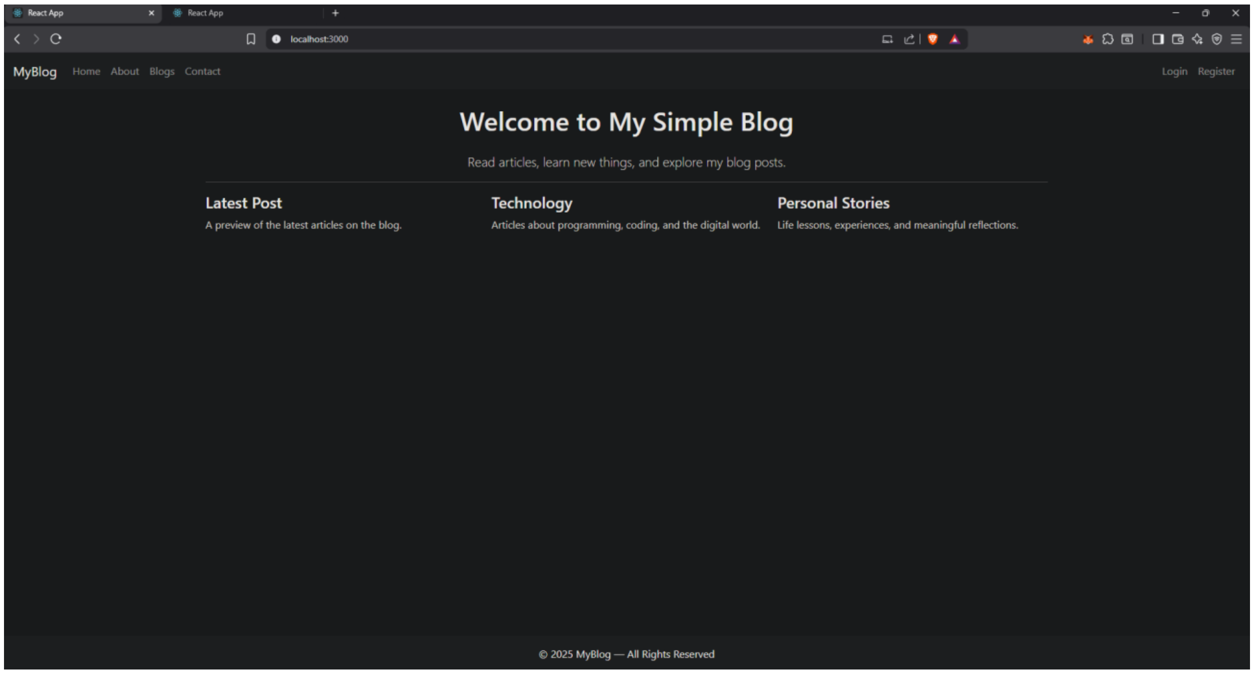
```
// backend/authRoutes.js
import express from "express";
import User from "./userModel.js";

const router = express.Router();

// REGISTER
router.post("/register", async (req, res) => {
  const { username, email, password } = req.body;
  if (!username || !email || !password) return res.status(400).json({ message: "All fields are required" });

  try {
    const exists = await User.findOne({ email });
    if (exists) return res.status(400).json({ message: "Email already registered" });

    // NOTE: This tutorial does not hash the password.
    const newUser = new User({ username, email, password });
    await newUser.save();

    res.status(201).json({ message: "User registered successfully" });
  } catch (err) {
    res.status(500).json({ error: err.message });
  }
});

// LOGIN
router.post("/login", async (req, res) => {
  const { email, password } = req.body;
  if (!email || !password) return res.status(400).json({ message: "Email and password required" });

  try {
    const user = await User.findOne({ email });
    // NOTE: This simple login check does not use bcrypt/hashing.
    if (!user || user.password !== password) return res.status(400).json({ message: "Invalid credentials" });

    res.status(200).json({
      message: "Login successful",
      user: { id: user._id, username: user.username, email: user.email }
    });
  } catch (err) {
    res.status(500).json({ error: err.message });
  }
});

export default router;
```

9. Start the backend using these commands: npm run backend and npm run dev



```
PORT=5000
MONGO_URI=mongodb+srv://tristanjhaysalamat_db_user:PO0ClFxrFXPQMR00@cluster0.q2azigt.mongodb.net/labblog?retryWrites=tr
ue&w=majority
JWT_SECRET=This_Is_A_Random_Secret_Key_For_Auth_35791
```

```
flexycode  Desktop  myblog2  3af9ad14  npm run dev
[0]
[0] > myblog2@0.1.0 backend
[0] > node backend/server.js
[0]
[1]
[1] > myblog2@0.1.0 start
[1] > react-scripts start
[1]
[0] Checking .env at: C:\Users\flexycode\Desktop\MyBLog-main\myblog2\backend\.env
[0] Exists? true
[0] [dotenv@17.2.3] injecting env (3) from backend\.env -- tip: 🔐 prevent building .env in docker: https://dotenvx.com/prebuild
[0] Loaded MONGO_URI = [OK]
[0] Loaded PORT = 5000
[0] MongoDB Connection Error: retryWrites must be either "true" or "false"
[0] npm run backend exited with code 0
[1] (node:16568) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
[1] (Use `node --trace-deprecation ...` to show where the warning was created)
[1] (node:16568) [DEP_WEBPACK_DEV_SERVER_ON_BEFORE_SETUP_MIDDLEWARE] DeprecationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
[1] Starting the development server...
[1]
```



Welcome to My Simple Blog

Read articles, learn new things, and explore my blog posts.

Latest Post
A preview of the latest articles on the blog.

Technology
Articles about programming, coding, and the digital world.

Personal Stories
Life lessons, experiences, and meaningful reflections.

© 2025 MyBlog — All Rights Reserved