

**Laporan Praktikum**

**Mata Kuliah**

**PEMROGRAMAN BERORIENTASI OBJEK**



**Praktikum**

Dosen Pengampu :  
Willdan Aprizal Arifin, S.Pd., M.Kom.

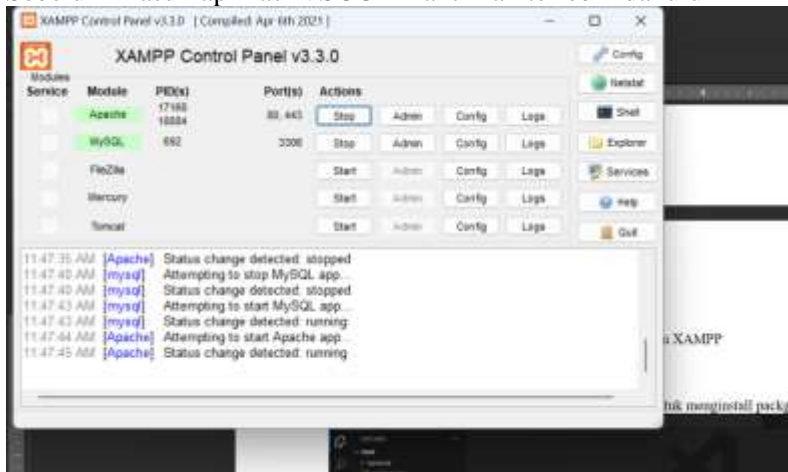
Disusun Oleh:  
Serliya  
2306837

**PROGRAM STUDI SISTEM INFORMASI  
KELAUTANUNIVERSITAS PENDIDIKAN  
INDONESIA**

**2024**

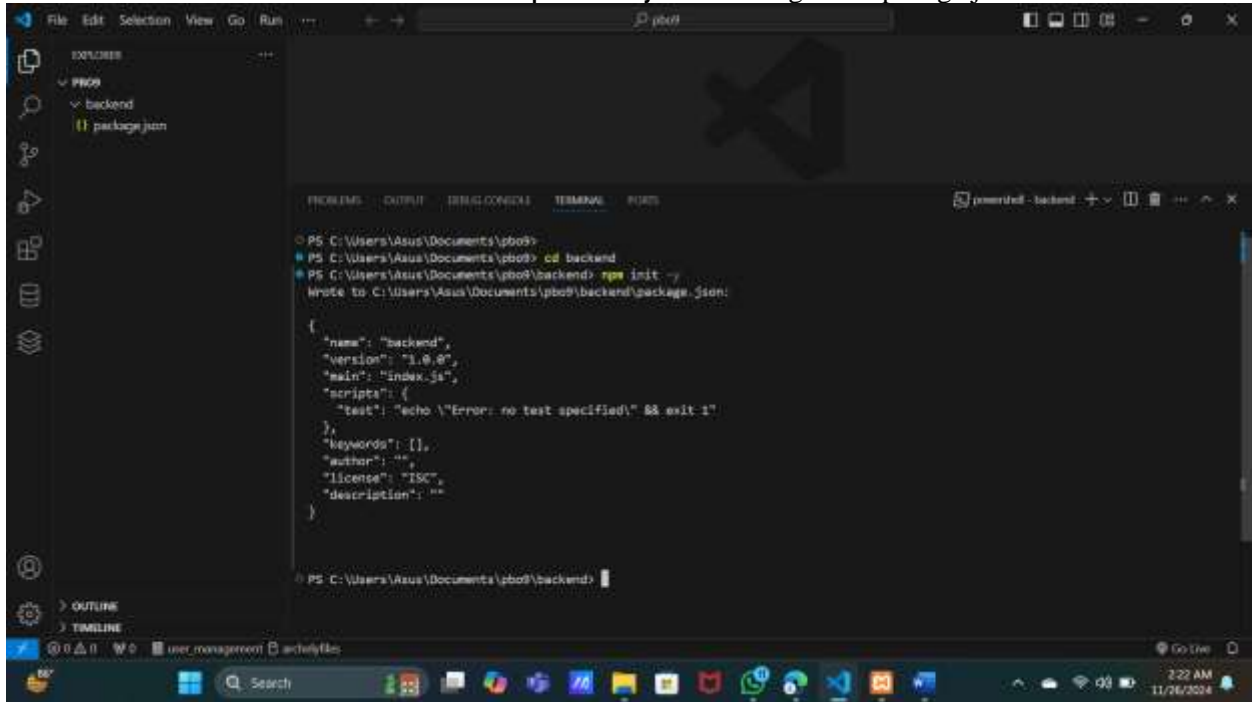
## Langkah-Langkah

Sebelum masuk aplikasi VSCODE aktifkan terlebih dahulu XAMPP

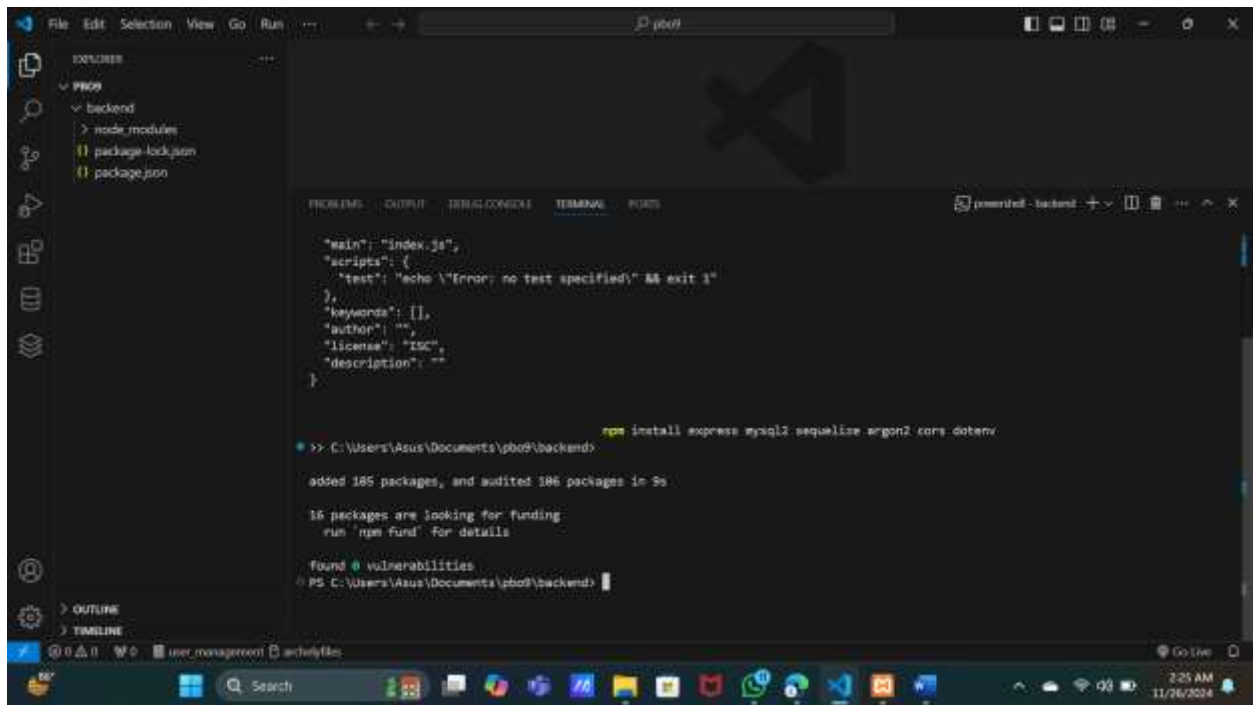


Buat folder baru, buka aplikasi vscode pilih “open folder”  
buat sub folder bernama “backend”

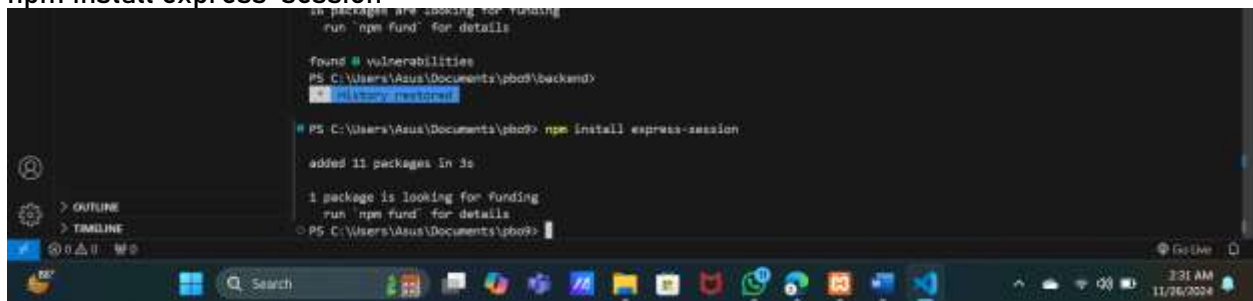
Pada terminal ketik `cd backend` lalu ketik `npm init -y` untuk menginstall package.json



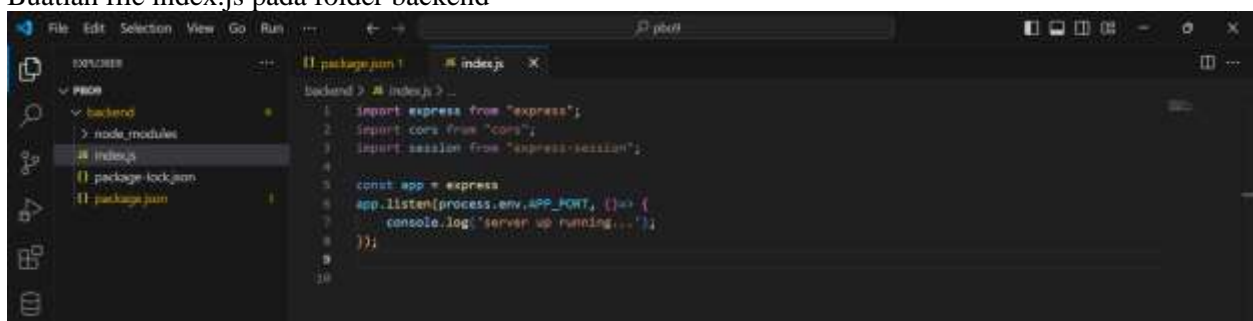
`npm install express mysql2 sequelize argon2 cors dotenv`



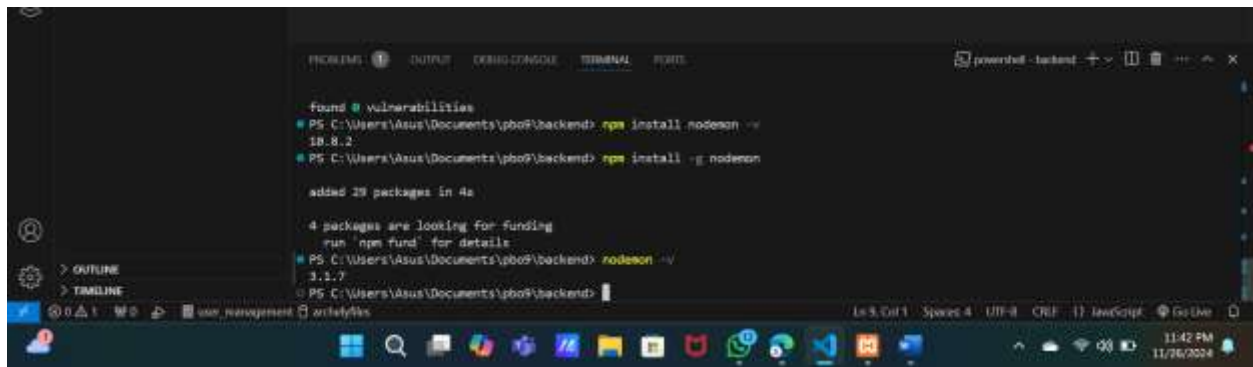
npm install express-session



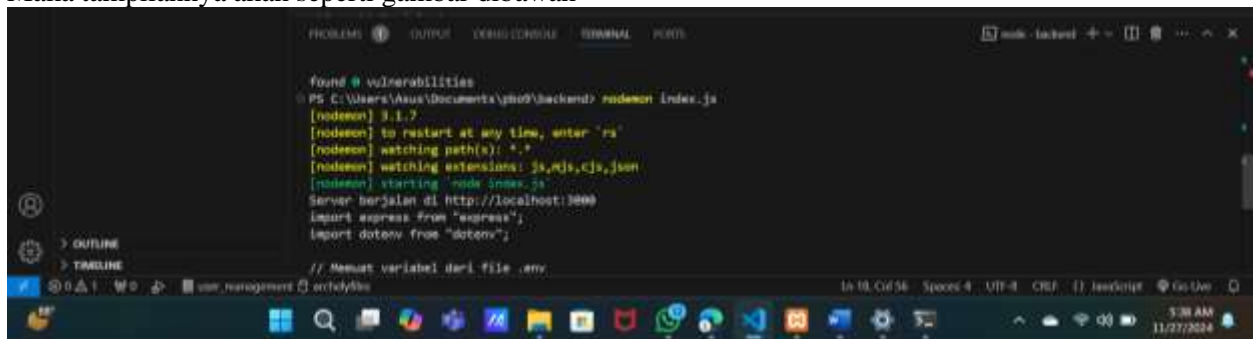
Buatlah file index.js pada folder backend



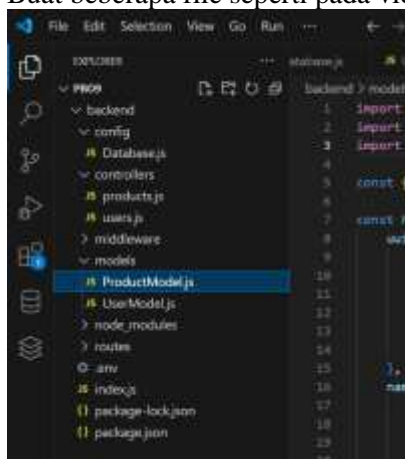
Install nodemon -v secara global



Maka tampilannya akan seperti gambar dibawah



Buat beberapa file seperti pada video



Pada folder models, buatlah file UserModels.js dan ProductsModel.js kodenya sebagai berikut;

UsersModel.js	ProductsModel.js
<code>import {Sequelize} from "sequelize";</code>	<code>import {Sequelize} from "sequelize";</code>

```

import db from "/config/Database.js";

const {DataTypes} = Sequelize;

const Users = db.define('users',{}, {
  uuid: {
    type: DataTypes.STRING,
    defaultValue:
DataTypes.UUIDV4,
    allowNull: false,
    validate: {
      notEmpty: true
    }
  },
  name:{
    type: DataTypes.STRING,
    allowNull: false,
    validate: {
      notEmpty: true,
      len: [3, 100]
    }
  },
  email:{
    type: DataTypes.STRING,
    allowNull: false,
    validate: {
      notEmpty: true,
      isEmail: true
    }
  },
  password:{
    type: DataTypes.STRING,
    allowNull: false,
    validate: {
      notEmpty: true
    }
  },
  role:{
    type: DataTypes.STRING,
    allowNull: false,
    validate: {
      notEmpty: true
    }
  }
}, {

```

```

import db from "/config/Database.js";
import Users from "/UserModel.js";

const {DataTypes} = Sequelize;

const Products = db.define('products',
{
  uuid: {
    type: DataTypes.STRING,
    defaultValue:
DataTypes.UUIDV4,
    allowNull: false,
    validate: {
      notEmpty: true
    }
  },
  name:{
    type: DataTypes.STRING,
    allowNull: false,
    validate: {
      notEmpty: true,
      len: [3, 100]
    }
  },
  email:{
    type: DataTypes.STRING,
    allowNull: false,
    validate: {
      notEmpty: true,
      isEmail: true
    }
  },
  price:{
    type: DataTypes.INTEGER,
    allowNull: false,
    validate: {
      notEmpty: true
    }
  },
  userId:{
    type: DataTypes.INTEGER,
    allowNull: false,
    validate: {
      notEmpty: true
    }
  }

```

<pre>         freezeTableName: true     });  export default Users; </pre>	<pre>     }   }, {     freezeTableName: true   });  Users.hasMany(Products); Products.belongsTo(Users, {foreignKey: 'userId'});  export default Products; </pre>
---	--

Pada folder Controller, buatlah file UserModels.js dan ProductModel.js kodenya sebagai berikut;

UsersModel.js	ProductsModel.js
<pre> import User from "../models/UsersModel.js"; import argon2 from "argon2";  export const getUsers = async(req, res) =&gt;{     try {         const response = await User.findAll({             attributes:['uuid', 'email', 'role']         });         res.status(200).json(response);     } catch (error) {         res.status(500).json({msg: error.message});     } }  export const getUserById = async(req, res) =&gt;{     try {         const response = await User.findOne({             where: {                 uuid: req.params.id             }         });         res.status(200).json(response);     } catch (error) { </pre>	<pre> import Product from "../models/ProductModel.js"; import argon2 from "argon2";  export const getProducts = (req, res) =&gt;{     } export const getProductById = async(req, res) =&gt;{     }  export const createProduct = (req, res) =&gt;{     }  export const updateProduct = (req, res) =&gt;{     }  export const deleteProduct = (req, res) =&gt;{     } </pre>

```

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

export const createUser = async(req,
res) =>{
    const {name, email, password,
confPassword, role} = req.body;
    if(password !== confPassword)
return res.status(400).json({msg:
"Password dan Confirm Password tidak
cocok"});
    const hashPassword = await
argon2.hash(password);
    try {
        await User.create({
            name: name,
            email: email,
            password: hashPassword,
            role: role
        });
        res.status(201).json({msg:
"Register Berhasil"});
    } catch (error) {
        res.status(400).json({msg:
error.message});
    }
}

export const updateUser = async(req,
res) =>{}
    const user = await User.findOne({
        where: {
            uuid: req.params.id
        }
    });
    if(!user) return
res.status(404).json({msg: "User tidak
ditemukan"});
    const {name, email, password,
confPassword, role} = req.body;
    let hashPassword;
    if(password === "" || password ===
null){
        hashPassword = user.password

```

```

    }else{
        hashPassword = await
argon2.hash(password);
    }
    if(password !== confPassword)
return res.status(400).json({msg:
"password dan Confirm Password tidak
cocok"});
    try {
        await User.create({
            name: name,
            email: email,
            password: hashPassword,
            role: role
        },{
            where:{
                id: user.id
            }
        });
        res.status(200).json({msg:
"User Updated"});
    } catch (error) {
        res.status(400).json({msg:
error.message});
    }

export const deleteUser = async(req,
res) =>{
    const user = await User.findOne({
        where: {
            uuid: req.params.id
        }
    });
    if(!user) return
res.status(404).json({msg: "User tidak
ditemukan"});
    try {
        await User.destroy({
            where:{
                id: user.id
            }
        });
        res.status(200).json({msg:
"User Deleted"});
    } catch (error) {

```



```

        res.status(400).json({msg:
error.message});
    }
}

```

Pada folder routes, buatlah file UserModels.js dan ProductsModel.js kodenya sebagai berikut;

UserRoute.js

```

import express from "express";
import {

    getUsers,
    getUserById,
    createUser,
    updateUser,
    deleteUser
} from "../controllers/Users.js";

const router = express.Router();

router.get ('/users', getUsers);
router.get ('/users/:id',
getUserById);
router.post ('/users', createUser);
router.patch ('/users/:id',
updateUsers);
router.delete ('/users/:id',
deleteUsers);
export default router;

```

ProductsRoute.js

```

import express from "express"
import {

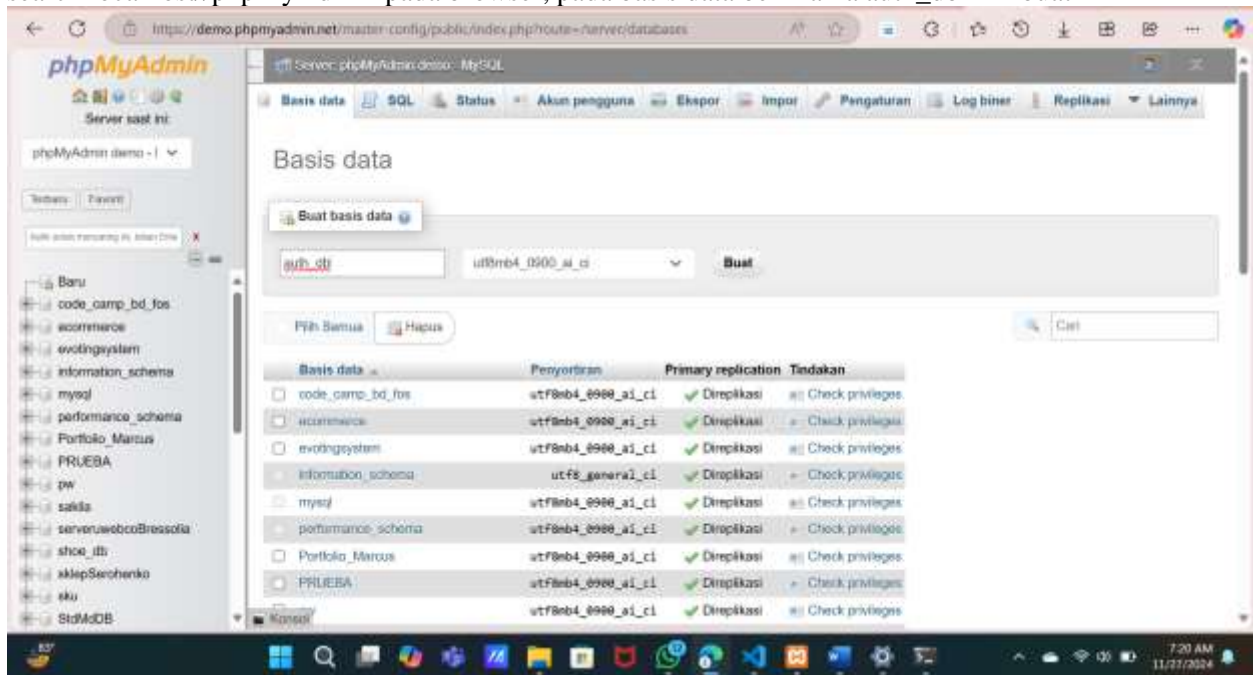
    getProducts,
    getProductById,
    createProduct,
    UpdateProduct,
    deleteProduct
} from "../controllers/products.js";

const router = express.Router();

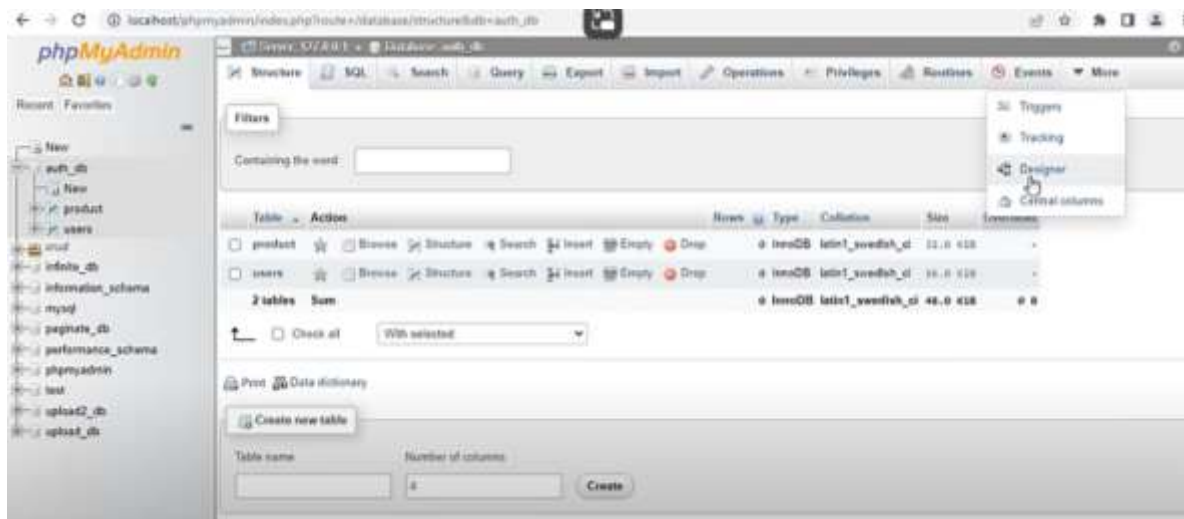
router.get ('/products', getProducts);
router.get ('/products/:id',
getProductById);
router.post ('/products',
createProduct);
router.patch ('/products/:id',
UpdateProduct);
router.delete ('/products/:id',
deleteProduct);
export default router;

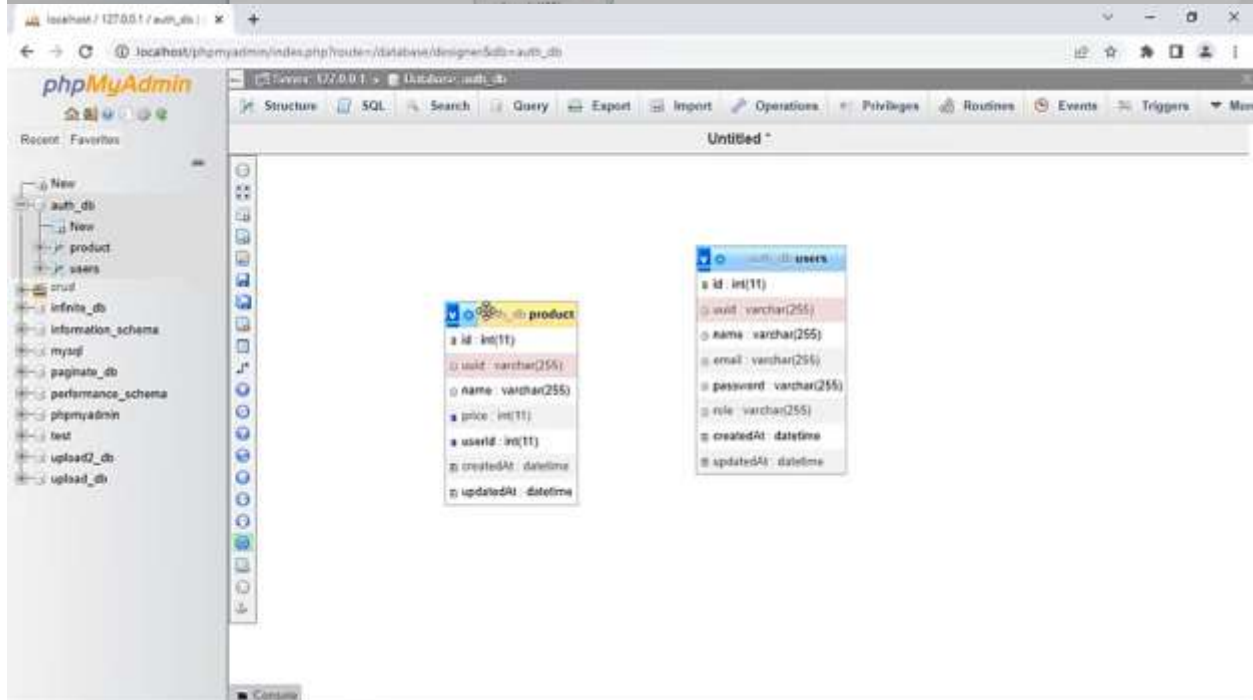
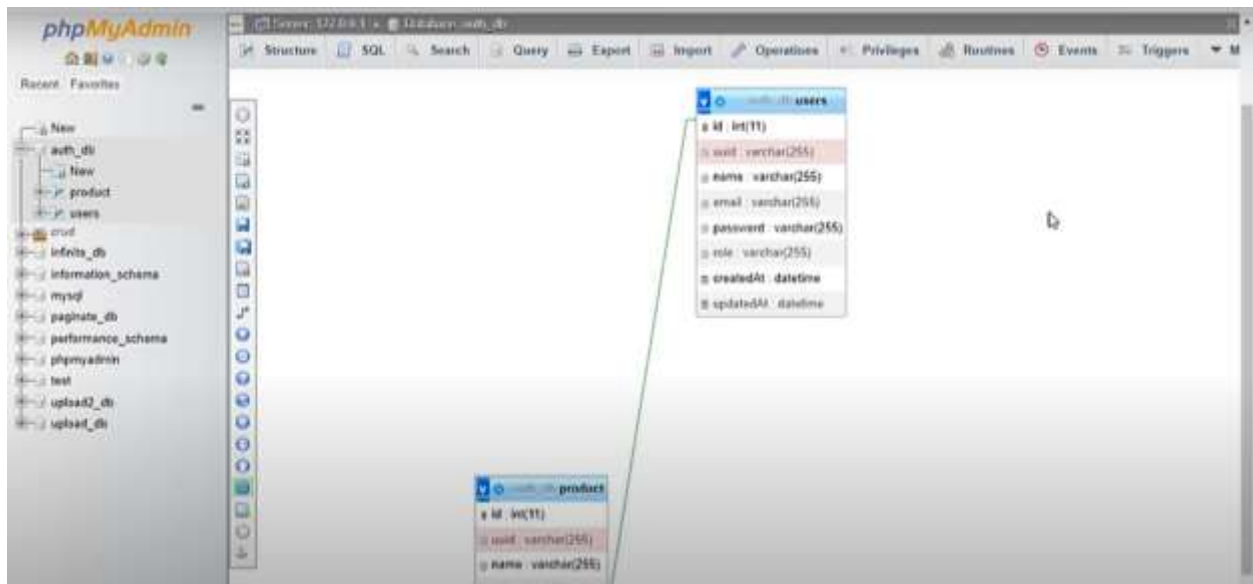
```

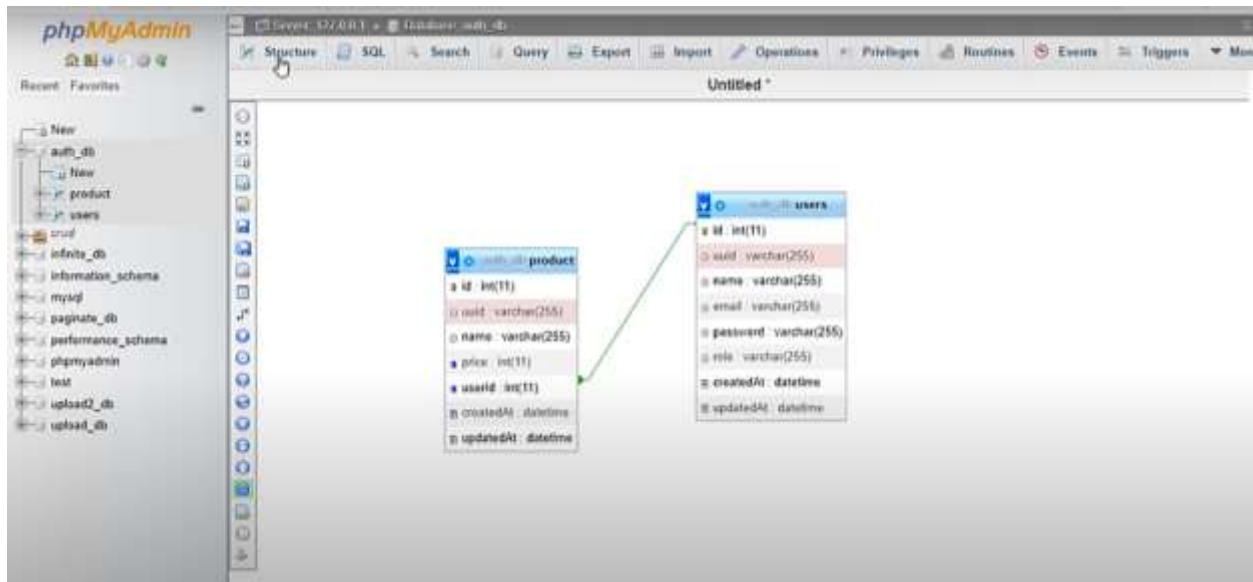
search localhost//phpMyAdmin pada browser, pada basis data beri nama auth\_db klik buat



buka phpmyAdmin, maka databasenya akan terlihat







kode folder controller yang berisi;  
auth.js

```
import User from "../moduls/UserModel.js";
import argon2 from "argon2";

export const Login = async (req, res) =>{
  const user = await User.findOne({
    where: {
      email: req.body.email
    }
  });
  if(!user) return res.status(404).json({msg: "User tidak ditemukan"});
  const match = await argon2.verify(user.password, req.body.password);
  if(!match) return res.status(400).json({msg: "Wrong Password"});
  req.session.userId = user.uuid;
  const uuid = user.uuid;
  const name = user.name;
  const email = user.email;
  const role = user.role;
  res.status(200).json({uuid, name, email, role});
}

export const Me = async (req, res) =>{
  if(!req.session.userId){
    return res.status(401).json({msg: "Mohon login ke akun Anda!"});
  }
  const user = await User.findOne({
    attributes: ['uuid', 'name', 'email', 'password', 'role'],
    where: {
      uuid: req.session.userId
    }
  });
}
```

```

    }
  });
  if(!user) return res.status(404).json({msg: "User tidak ditemukan"});
  res.status(200).json(user);
}

export const logOut = (req, res) =>{
  req.session.destroy((err)=>{
    if(err) return res.status(400).json({msg: "Tidak dapat logout"});
    res.status(200).json({msg: "Anda telah logout "});

  });
}

```

#### Product.js

```

import Product from "../models/ProductModel.js";
import argon2 from "argon2";

export const getProducts = (req, res) =>{
  }
export const getProductById = async(req, res) =>{
  }

export const createProduct = (req, res) =>{
  }
export const updateProduct = (req, res) =>{
  }
export const deleteProduct = (req, res) =>{
  }

```

#### User.js

```

import User from "../models/UsersModel.js";
import argon2 from "argon2";

export const getUsers = async(req, res) =>{
  try {
    const response = await User.findAll({
      attributes:['uuid', 'email', 'role']
    });
    res.status(200).json(response);
  } catch (error) {
    res.status(500).json({msg: error.message});
  }
}

```

```

    }
  }

export const getUserById = async(req, res) =>{
  try {
    const response = await User.findOne({
      where: {
        uuid: req.params.id
      }
    });
    res.status(200).json(response);
  } catch (error) {
    res.status(500).json({msg: error.message});
  }
}

export const createUser = async(req, res) =>{
  const {name, email, password, confPassword, role} = req.body;
  if(password !== confPassword) return res.status(400).json({msg: "Password dan Confirm Password tidak cocok"});
  const hashPassword = await argon2.hash(password);
  try {
    await User.create({
      name: name,
      email: email,
      password: hashPassword,
      role: role
    });
    res.status(201).json({msg: "Register Berhasil"});
  } catch (error) {
    res.status(400).json({msg: error.message});
  }
}

export const updateUser = async(req, res) =>{}
  const user = await User.findOne({
    where: {
      uuid: req.params.id
    }
  });
  if(!user) return res.status(404).json({msg: "User tidak ditemukan"});
  const {name, email, password, confPassword, role} = req.body;
  let hashPassword;
  if(password === "" || password === null){
    hashPassword = user.password
  }else{

```

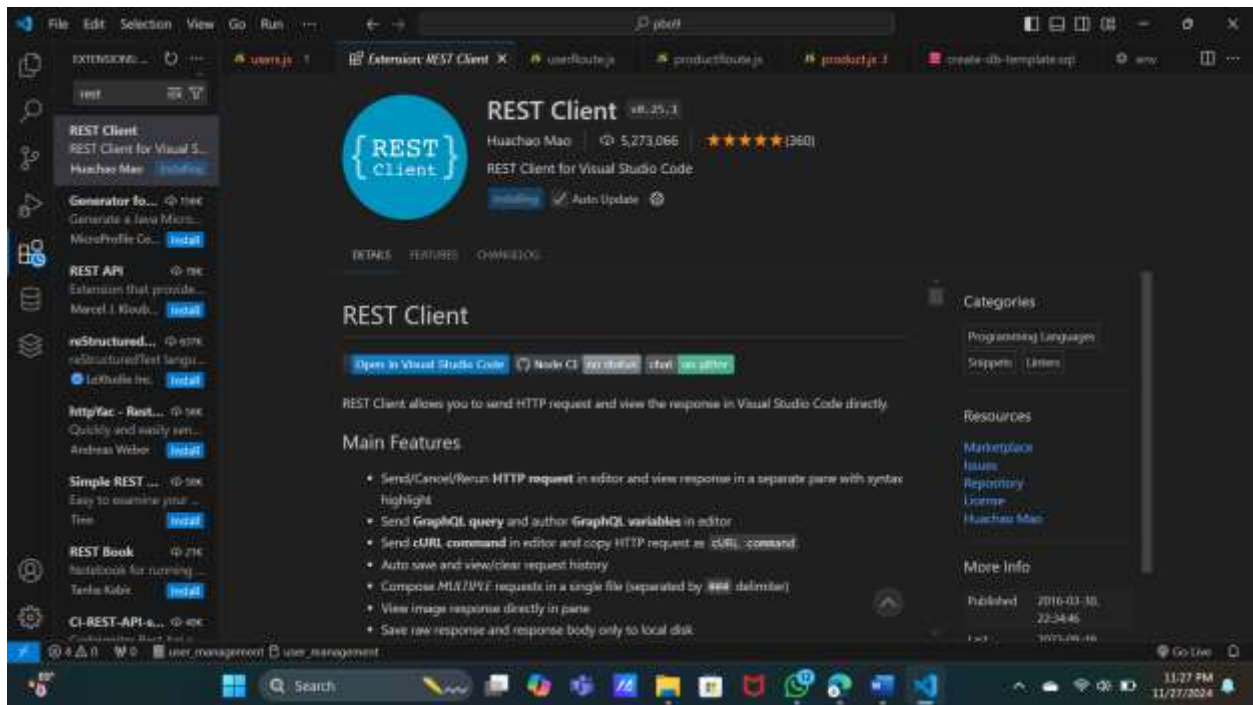
```

        hashPassword = await argon2.hash(password);
    }
    if(password !== confPassword) return res.status(400).json({msg: "password dan
Confirm Password tidak cocok"});
    try {
        await User.create({
            name: name,
            email: email,
            password: hashPassword,
            role: role
        }, {
            where: {
                id: user.id
            }
        });
        res.status(200).json({msg: "User Updated"});
    } catch (error) {
        res.status(400).json({msg: error.message});
    }

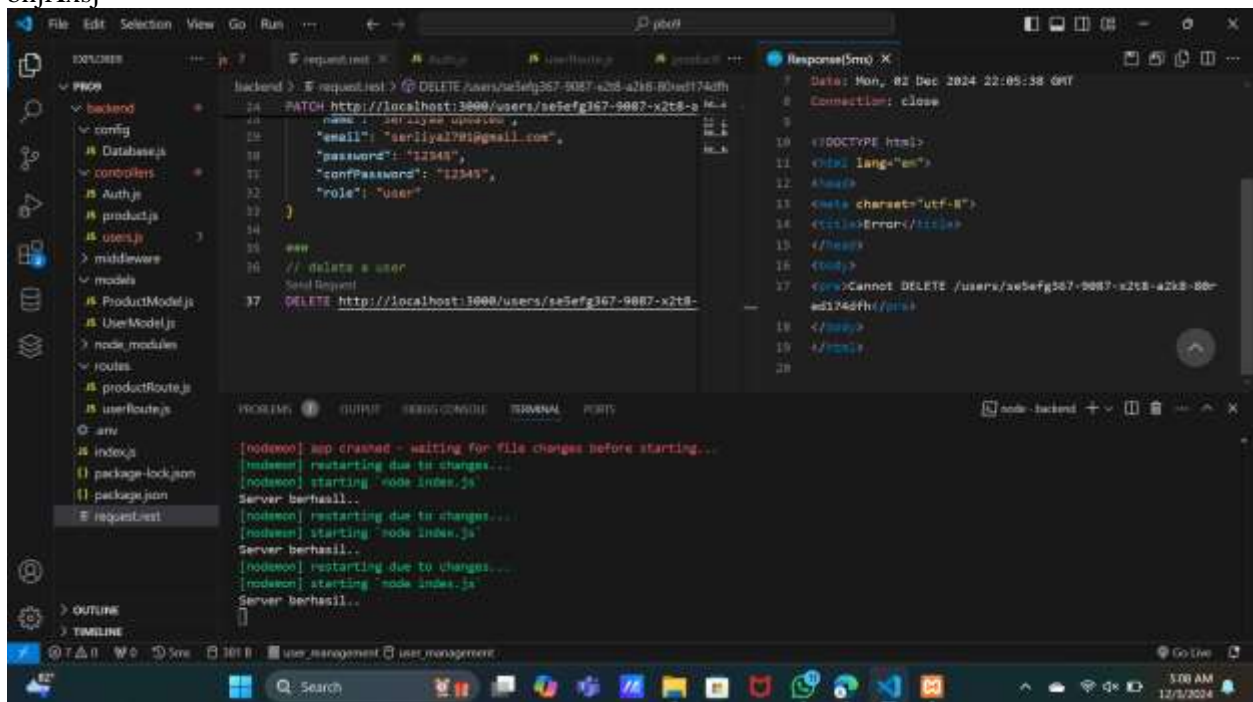
export const deleteUser = async(req, res) =>{
    const user = await User.findOne({
        where: {
            uuid: req.params.id
        }
    });
    if(!user) return res.status(404).json({msg: "User tidak ditemukan"});
    try {
        await User.destroy({
            where: {
                id: user.id
            }
        });
        res.status(200).json({msg: "User Deleted"});
    } catch (error) {
        res.status(400).json({msg: error.message});
    }
}

```

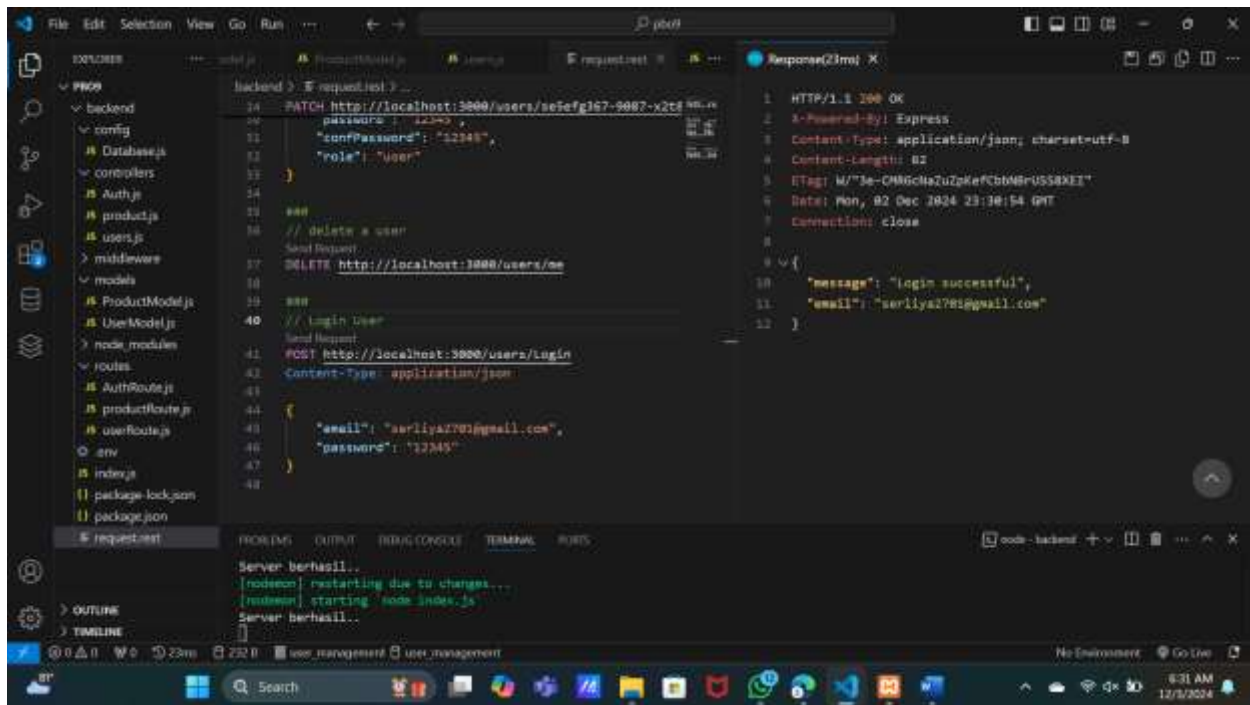
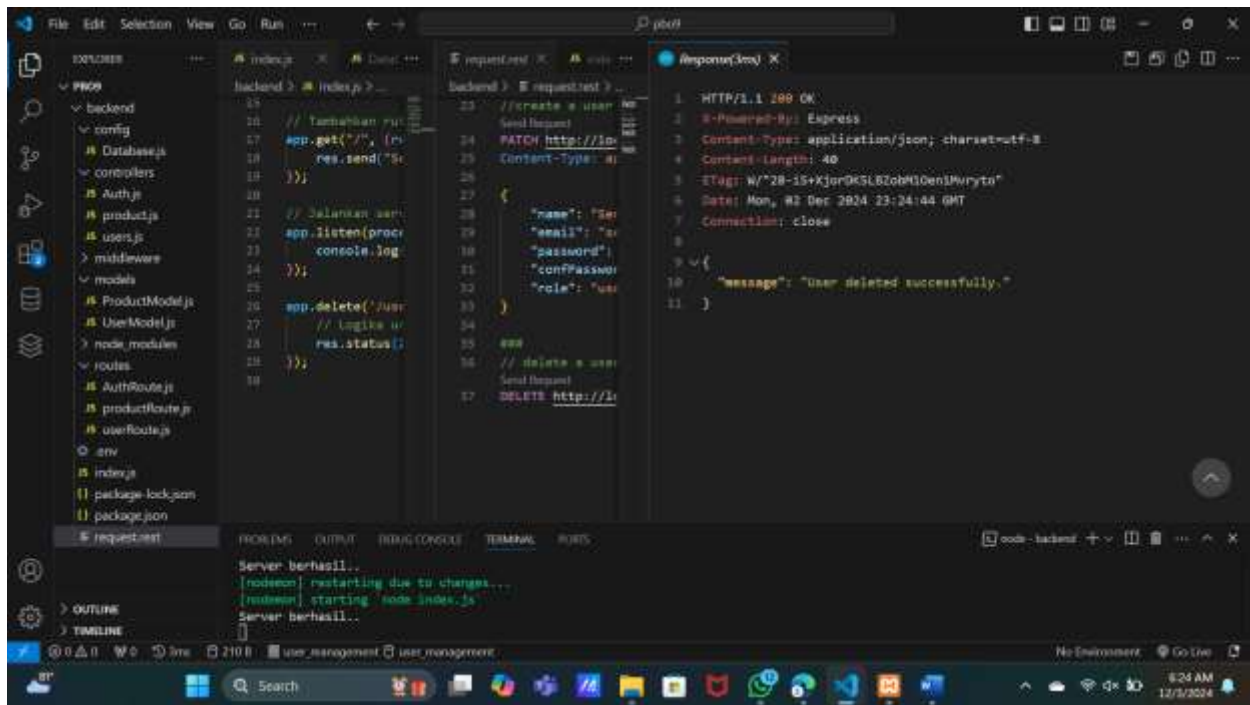
install REST Client

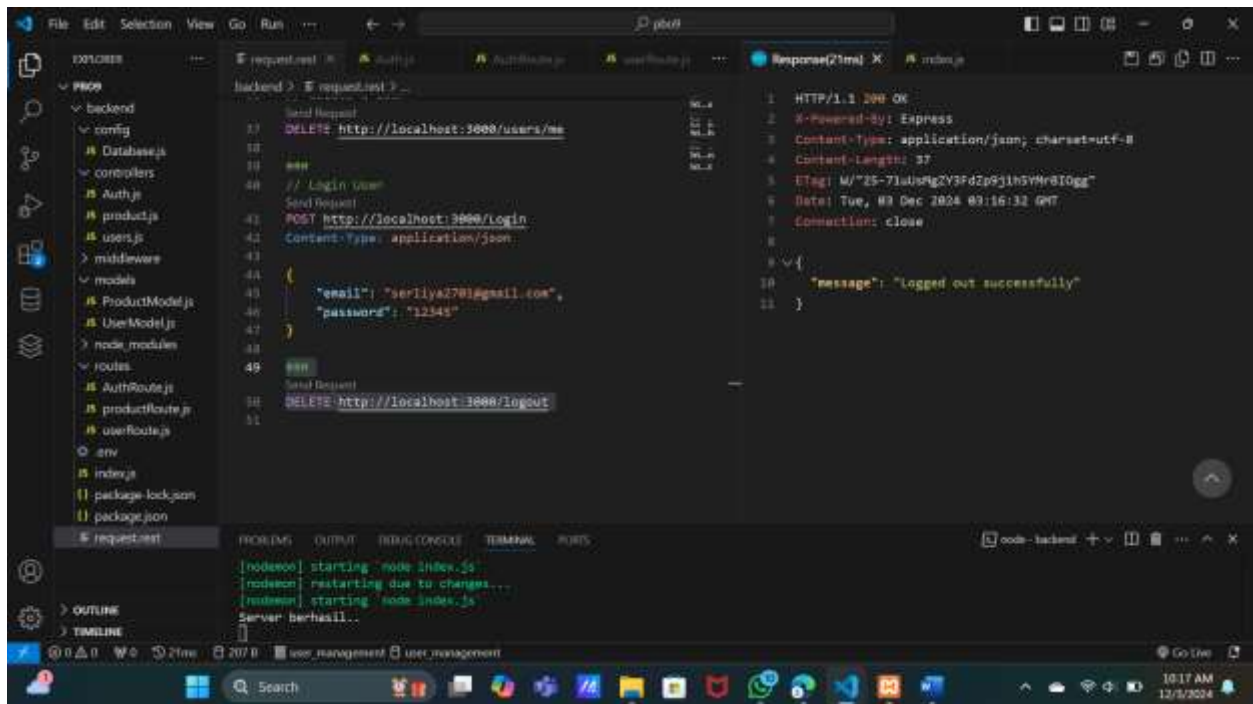
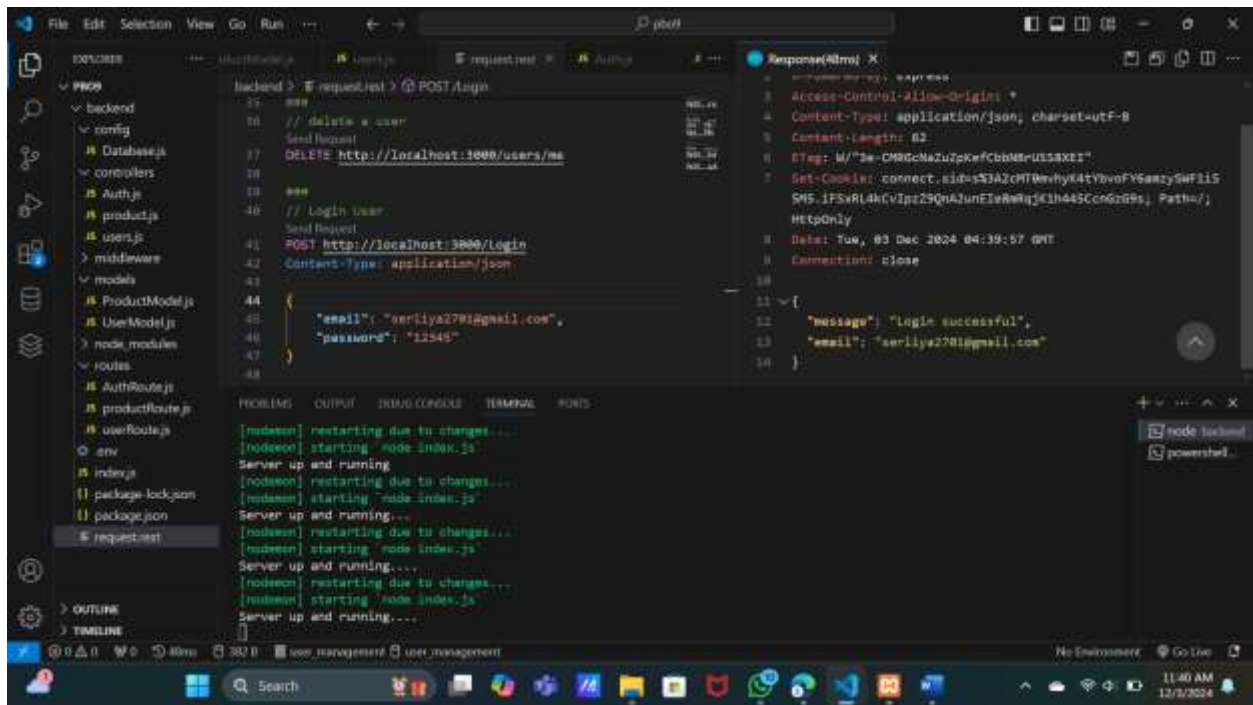


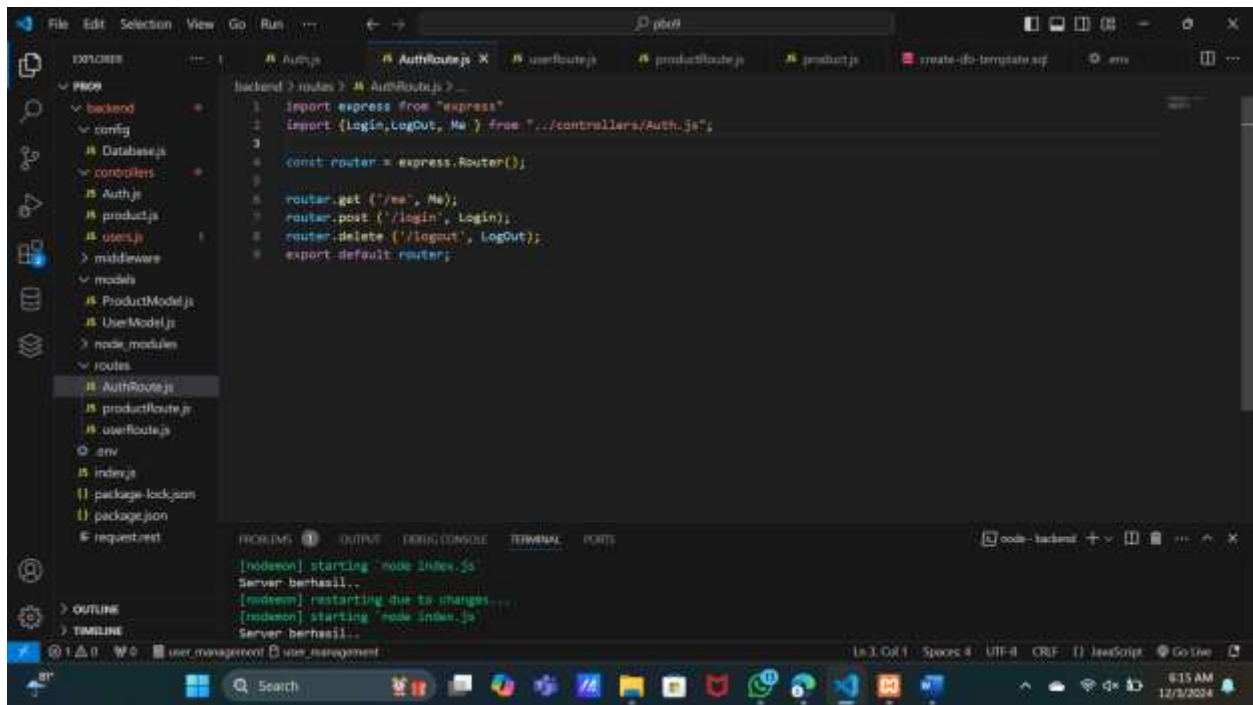
bhjXxsj



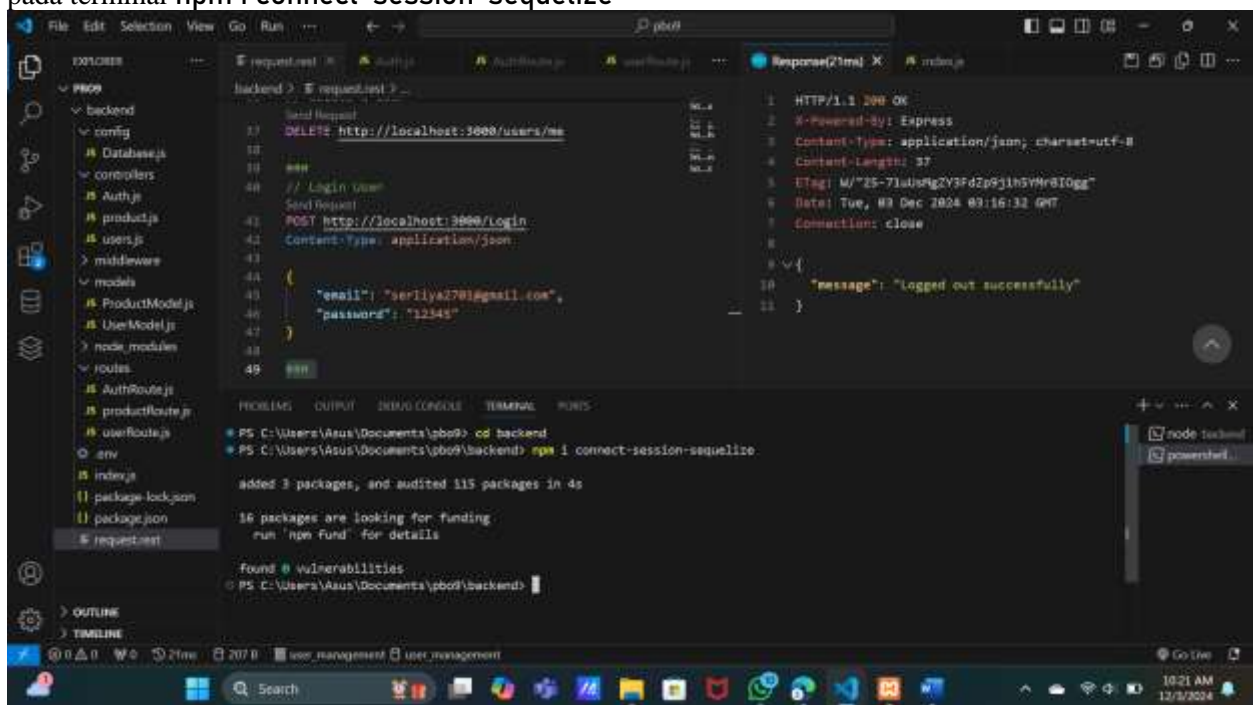




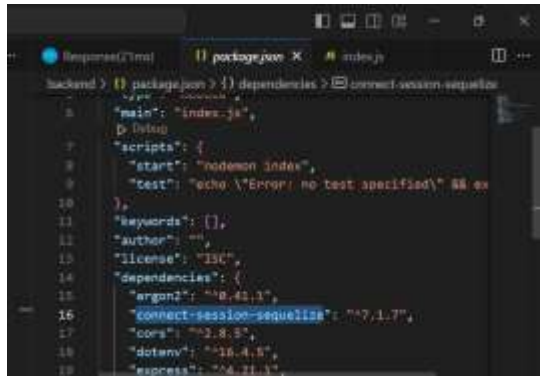




Install npm  
pada terminal `npm i connect-session-sequelize`



Jika sudah terinstall tertera pada package.json



Berikut merupakan code index.js

```
import express from "express"; // Pastikan Express diimpor dengan benar
import cors from "cors";
import session from "express-session";
import dotenv from 'dotenv';
import db from "/config/Database.js";
import Sequelize from "./connect-session-sequelize";
import session from "express-session";
import UserRoute from "/routes/ProductRoute.js";
import ProductRoute from "/routes/ProductRoute.js";
import AuthRoute from "/routes/ProductRoute.js";

dotenv.config(); // Memuat konfigurasi dari .env jika ada

const app = express();
const sessionStore = Sequelize(session.Store);

const store = new sessionStore({
  db:db
});

const PORT = process.env.APP_PORT || 3000; // Gunakan port dari .env atau default 3000

app.use(session({
  secret: process.env.SESS_SECRET,
  resave: false,
  saveUninitialized: true,
  Store: store,
  cookie: {
    secure: "auto"
  }
}));

app.use(cors({
```

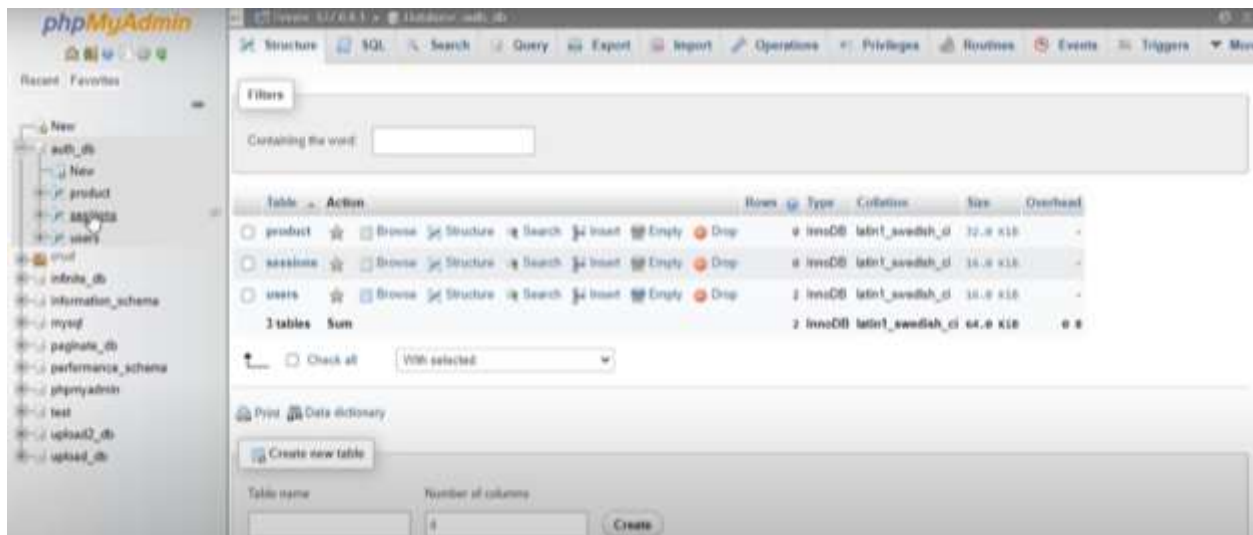
```

    credentials: true,
    origin: 'http://localhost:3000'
  }));
app.use(express.json());
app.use(UserRoute);
app.use(ProductRoute);
app.use(AuthRoute);

store.async();

app.listen(process.env.APP_PORT, ()=> {
  console.log('Server up and Running...');
});

```



Buatlah kode authroute.js pada folder route

```

import User from "/models/UserModel.js";

export const verifyUser = async (req, res, next)=>{
  if(!req.session.userId){
    return res.status(401).json({msg: "Mohon login ke akun Anda!"});
  }
  const user = await User.findOne({
    attributes:['uuid', 'name', 'email', 'password', 'role'],
    where: {
      uuid: req.session.userId
    }
  });
  if(!user) return res.status(404).json({msg: "User tidak ditemukan"});
  res.status(200).json(user);
}

```

}