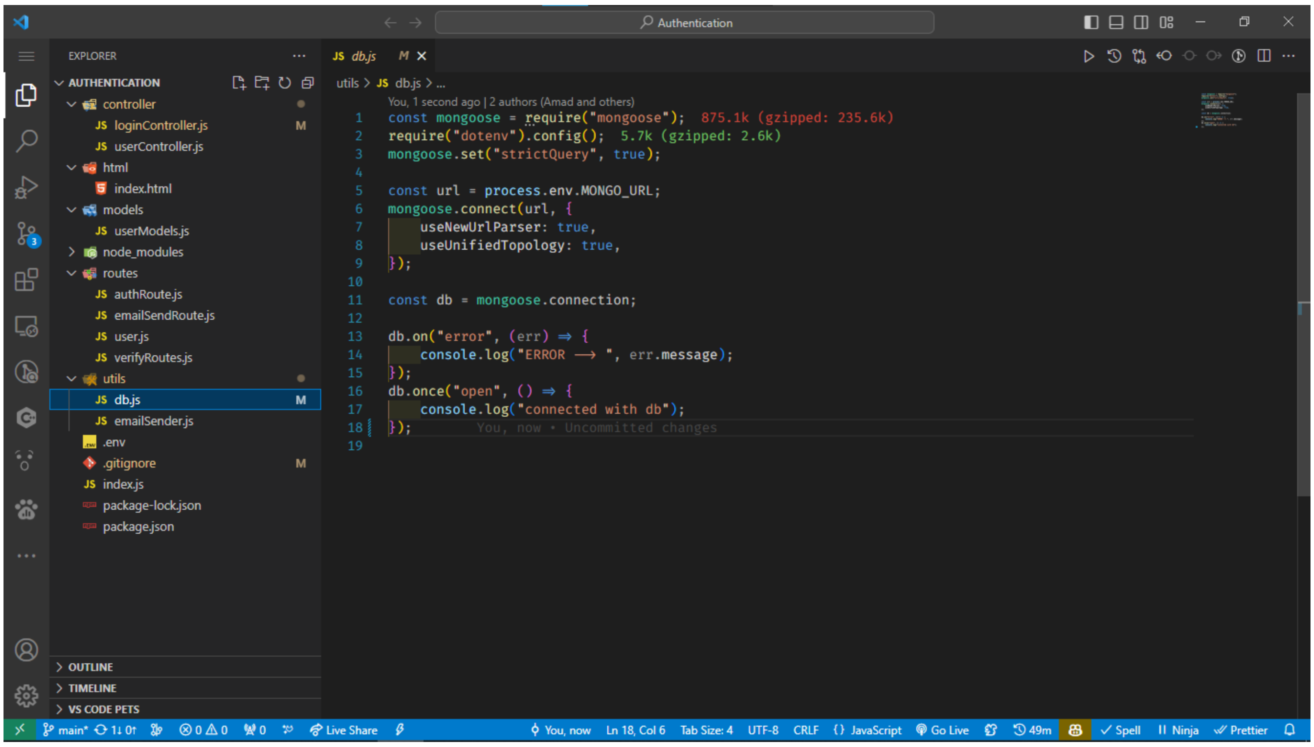
Final Report:

Name	Amad Irfan
Registration No	2021-CS-25

Directory Folders Screenshot :



```
AUTHENTICATION
  controller
    loginController.js        M
    userController.js
  html
    index.html
  models
    userModels.js
  node_modules
  routes
    authRoute.js
    emailSendRoute.js
    user.js
    verifyRoutes.js
  utils
    db.js                     M
    emailSender.js
  .env
  .gitignore                  M
  index.js
  package-lock.json
  package.json
```

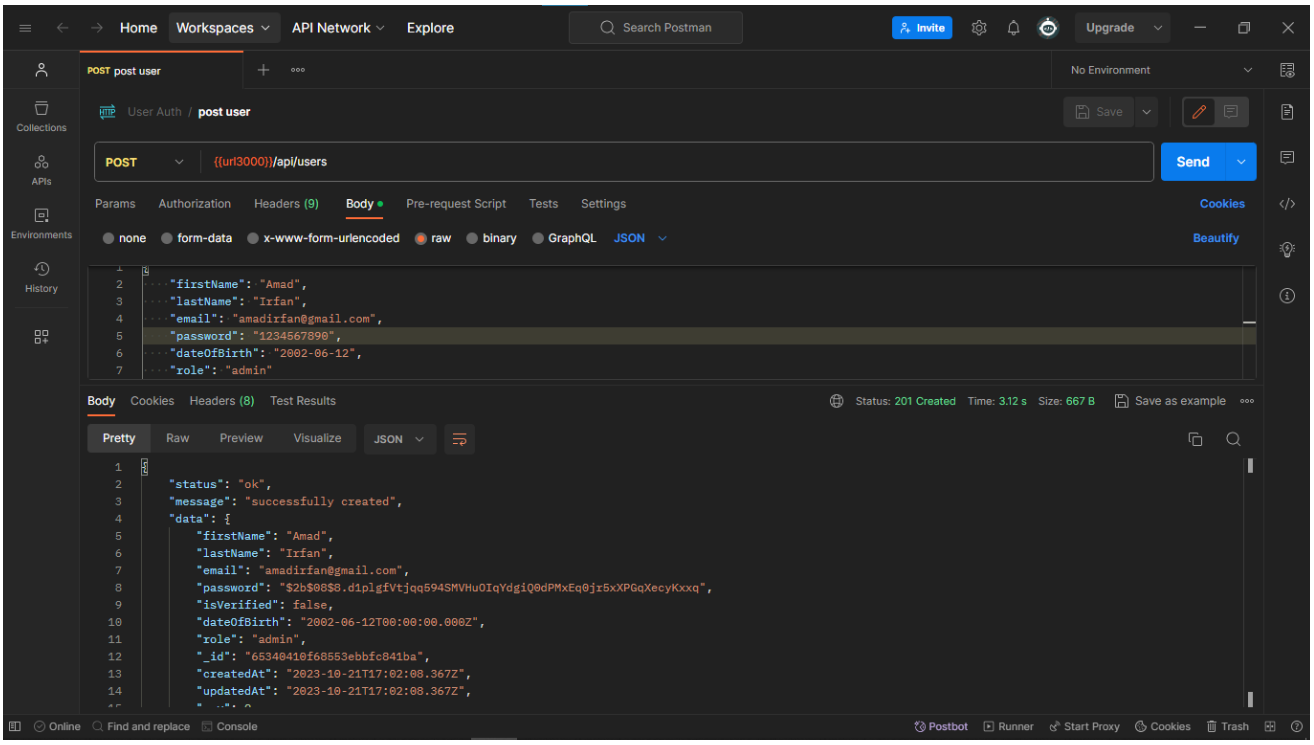
utils > db.js > ...

You, 1 second ago | 2 authors (Amad and others)

```js
const mongoose = require("mongoose");  875.1k (gzipped: 235.6k)
require("dotenv").config();  5.7k (gzipped: 2.6k)
mongoose.set("strictQuery", true);

const url = process.env.MONGO_URL;
mongoose.connect(url, {
    useNewUrlParser: true,
    useUnifiedTopology: true,
});

const db = mongoose.connection;

db.on("error", (err) ⇒ {
    console.log("ERROR ⟶ ", err.message);
});
db.once("open", () ⇒ {
    console.log("connected with db");
});        You, now • Uncommitted changes

```

Authentication
EXPLORER
OUTLINE
TIMELINE
VS CODE PETS
main* 1↓ 0↑ ⊗ 0 ⚠ 0 0 Live Share You, now Ln 18, Col 6 Tab Size: 4 UTF-8 CRLF {} JavaScript Go Live 49m Spell Ninja Prettier

Create Users Screenshot :



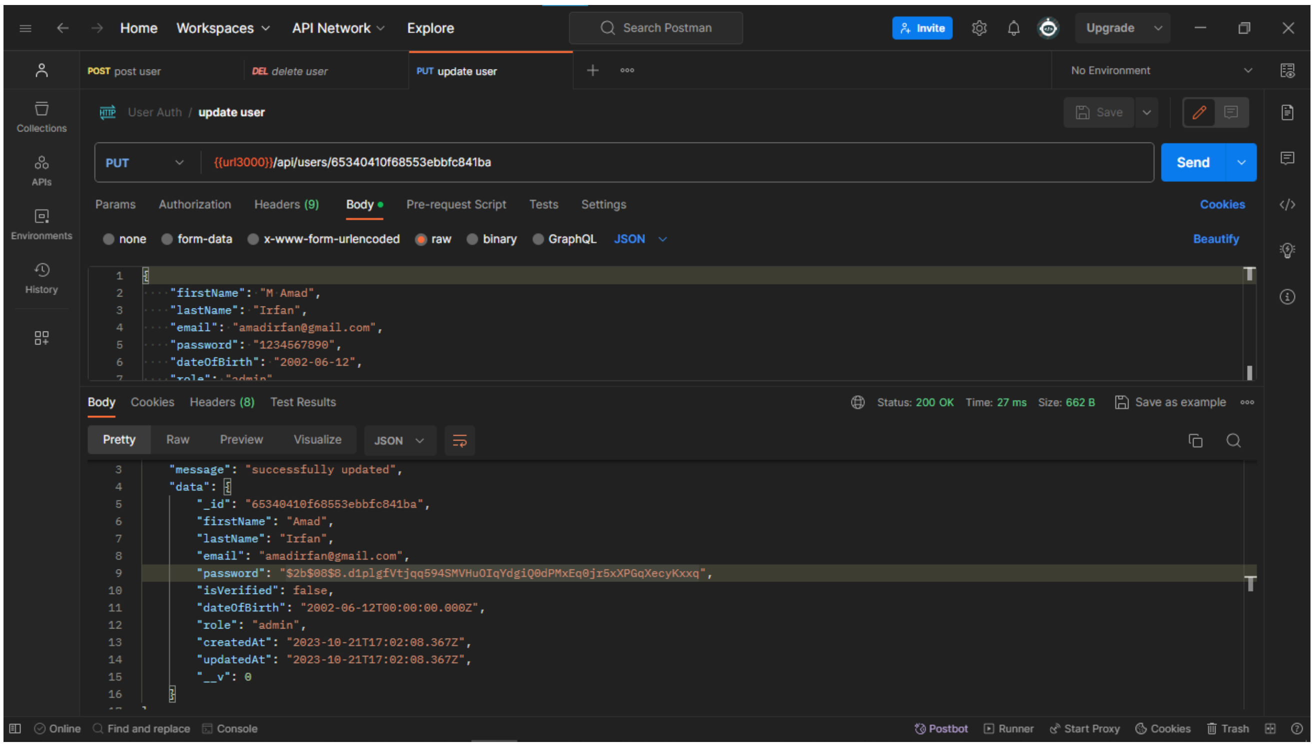
POST {{url3000}}/api/users

```
{
    "firstName": "Amad",
    "lastName": "Irfan",
    "email": "amadirfan@gmail.com",
    "password": "1234567890",
    "dateOfBirth": "2002-06-12",
    "role": "admin"
```

Body Cookies Headers (8) Test Results — Status: 201 Created Time: 3.12 s Size: 667 B Save as example

```
{
    "status": "ok",
    "message": "successfully created",
    "data": {
        "firstName": "Amad",
        "lastName": "Irfan",
        "email": "amadirfan@gmail.com",
        "password": "$2b$08$8.d1plgfVtjqq594SMVHuOIqYdgiQ0dPMxEq0jr5xXPGqXecyKxxq",
        "isVerified": false,
        "dateOfBirth": "2002-06-12T00:00:00.000Z",
        "role": "admin",
        "_id": "65340410f68553ebbfc841ba",
        "createdAt": "2023-10-21T17:02:08.367Z",
        "updatedAt": "2023-10-21T17:02:08.367Z",
```

Update User screenshot :



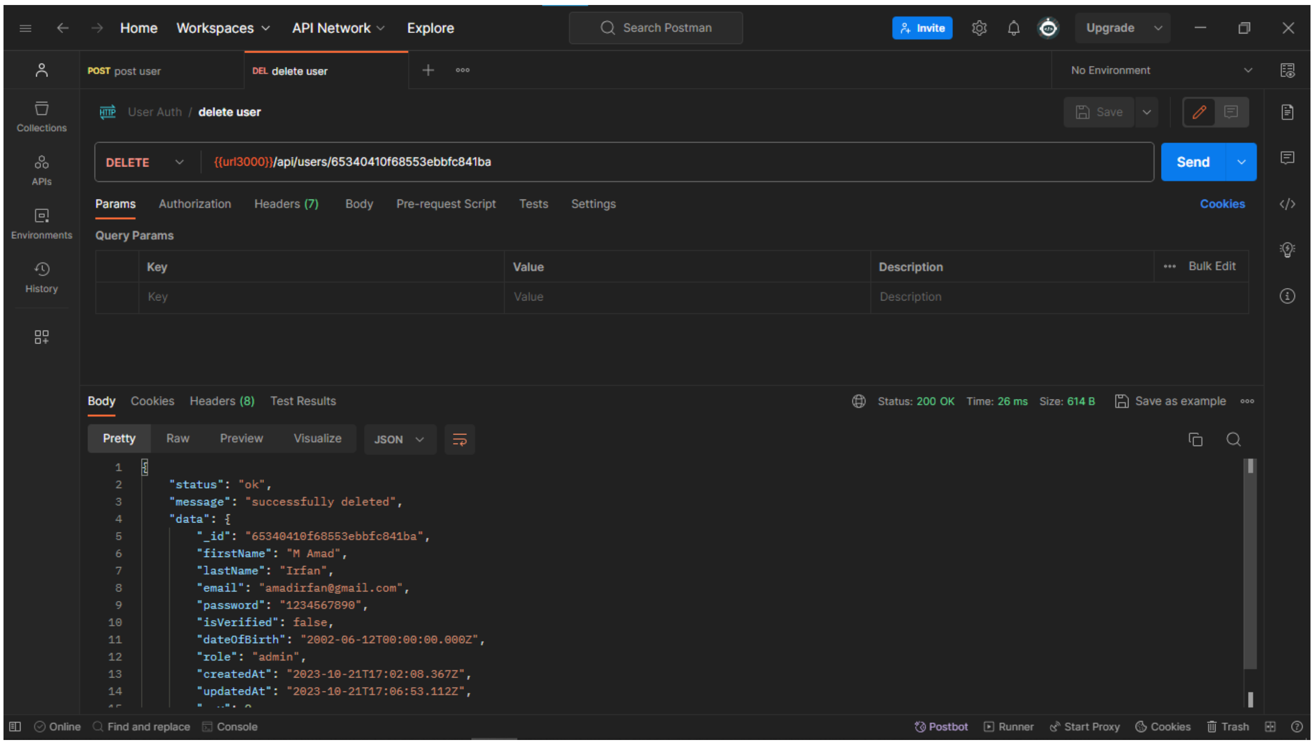
PUT {{url3000}}/api/users/65340410f68553ebbfc841ba

```
{
    "firstName": "M Amad",
    "lastName": "Irfan",
    "email": "amadirfan@gmail.com",
    "password": "1234567890",
    "dateOfBirth": "2002-06-12",
    "role": "admin"
```

Body Cookies Headers (8) Test Results — Status: 200 OK Time: 27 ms Size: 662 B Save as example

```
    "message": "successfully updated",
    "data": {
        "_id": "65340410f68553ebbfc841ba",
        "firstName": "Amad",
        "lastName": "Irfan",
        "email": "amadirfan@gmail.com",
        "password": "$2b$08$8.d1plgfVtjqq594SMVHuOIqYdgiQ0dPMxEq0jr5xXPGqXecyKxxq",
        "isVerified": false,
        "dateOfBirth": "2002-06-12T00:00:00.000Z",
        "role": "admin",
        "createdAt": "2023-10-21T17:02:08.367Z",
        "updatedAt": "2023-10-21T17:02:08.367Z",
        "__v": 0
    }
```

Delete user Screenshot :

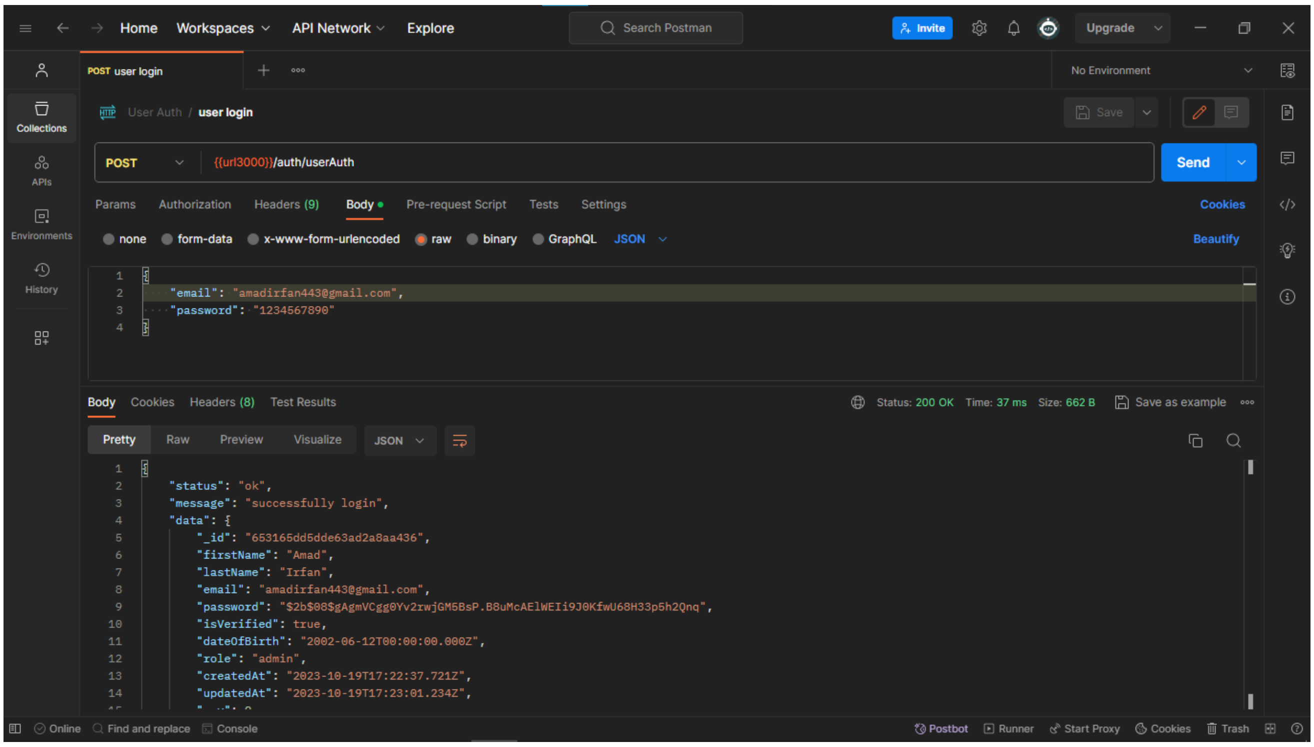


DELETE {{url3000}}/api/users/65340410f68553ebbfc841ba

Status: 200 OK Time: 26 ms Size: 614 B

```
{
    "status": "ok",
    "message": "successfully deleted",
    "data": {
        "_id": "65340410f68553ebbfc841ba",
        "firstName": "M Amad",
        "lastName": "Irfan",
        "email": "amadirfan@gmail.com",
        "password": "1234567890",
        "isVerified": false,
        "dateOfBirth": "2002-06-12T00:00:00.000Z",
        "role": "admin",
        "createdAt": "2023-10-21T17:02:08.367Z",
        "updatedAt": "2023-10-21T17:06:53.112Z",
```

User Login Screenshot :



POST {{url3000}}/auth/userAuth

```
{
    "email": "amadirfan443@gmail.com",
    "password": "1234567890"
}
```

Status: 200 OK Time: 37 ms Size: 662 B

```
{
    "status": "ok",
    "message": "successfully login",
    "data": {
        "_id": "653165dd5dde63ad2a8aa436",
        "firstName": "Amad",
        "lastName": "Irfan",
        "email": "amadirfan443@gmail.com",
        "password": "$2b$08$gAgmVCgg0Yv2rwjGM5BsP.B8uMcAElWEIi9J0KfwU68H33p5h2Qnq",
        "isVerified": true,
        "dateOfBirth": "2002-06-12T00:00:00.000Z",
        "role": "admin",
        "createdAt": "2023-10-19T17:22:37.721Z",
        "updatedAt": "2023-10-19T17:23:01.234Z",
```

Code :

`index.js` file code

```
const express = require("express");
const cors = require("cors");
const morgan = require("morgan");
const db = require("./utils/db");

const usersRoute = require("./routes/user");
const verify = require("./routes/verifyRoutes");
const authRoute = require("./routes/authRoute");
const app = express();
const email = require("./routes/emailSendRoute");
const bodyParser = require("body-parser");
require("dotenv").config();

app.use(cors());
app.use(bodyParser.json());
app.use(express.json());
app.use(morgan("dev"));


app.get("/", (req, res) => {
    res.send("Welcome to my Authentication app");
});
app.use("/api", usersRoute);
app.use("/verify", verify);
app.use("/auth", authRoute);
app.use("/sendEmail", email);

app.listen(process.env.PORT, () => {
    console.log("Server is running on port ", process.env.PORT);
});
```

`db.js` code .

```
const mongoose = require("mongoose");
require("dotenv").config();
mongoose.set("strictQuery", true);

const url = process.env.MONGO_URL;
mongoose.connect(url, {
    useNewUrlParser: true,
    useUnifiedTopology: true,
});

const db = mongoose.connection;

db.on("error", (err) => {
    console.log("ERROR --> ", err.message);
});
db.once("open", () => {
    console.log("connected with db");
});
```

`loginController.js` code .

```
const userModel = require("../models/userModels");
const bcrypt = require("bcrypt");
async function loginUser(req, res) {
    try {
        const { email, password } = req.body;
        let user = await userModel.findOne({ email });
        if (user) {
            const v = await bcrypt.compare(password, user.password);
            if (v) {
                res.status(200).json({
                    status: "ok",
                    message: "successfully login",
                    data: user,
                });
 } else {
                res.status(404).json({
                    status: "error",
                    message: "Wrong Password. check your password ",
                    data: req.body,
                });
            }
        } else {
            res.status(404).json({
                status: "error",
                message: "User with this email or password not exist",
                data: req.body,
            });
        }
    } catch (err) {
        res.status(302).json({
            status: "error",
            message: err.message,
            data: req.body,
        });
    }
}

module.exports = {
    loginUser,
};
```

`userController.js` code .

```
const userModel = require("../models/userModels");

const encrypt = require("bcrypt");
const { sendEmail } = require("../utils/emailSender");

async function registerUsers(req, res) {
    try {

        let { email } = req.body;
        let userAlreadyExists = await userModel.findOne({ email });
        if (!userAlreadyExists) {
            const hashPassword = await encrypt.hash(req.body.password, 8);
            let createUser = {
                email: req.body.email,
                password: hashPassword,
                firstName: req.body.firstName,
                lastName: req.body.lastName,
                dateOfBirth: req.body.dateOfBirth,
                role: req.body.role,
            };
            const data = await userModel.create(createUser);
            let result = await sendEmail(
                email,
                "Register successfully",
                `You have been registered successfully in Authentication system. Please verify
your email click on <a href='http://localhost:3000/verify/${data._id}'>verify</a>`
            );
            res.status(201).json({
                status: "ok",
                message: "successfully created",
                data: data,
            });
        } else {
            res.status(302).json({
                status: "error",
                message: "User with this email already exists",
                data: req.body,
            });
        }
    } catch (err) {
        res.status(500).json({
            status: "error",
            message: `internal error  ${err.message}`,
            data: null,
        });
    }
}

async function getUsers(req, res) {
    try {
        const data = await userModel.find();
        res.status(200).json({
            status: "ok",
            message: "success",
            data: data,
        });
    } catch (err) {
        res.status(500).json({
            status: "error",
            message: "internal error",
            data: null,

        });
    }
}

async function updateUsers(req, res) {
    try {
        const { id } = req.params;
        const data = await userModel.findByIdAndUpdate(id, req.body);
        res.status(200).json({
            status: "ok",
            message: "successfully updated",
            data: data,
        });
    } catch (err) {
        res.status(500).json({
            status: "error",
            message: "internal error",
            data: null,
        });
    }
}

async function deletesUsers(req, res) {
    try {
        const { id } = req.params;
        const data = await userModel.findByIdAndDelete(id);
        res.status(200).json({
            status: "ok",
            message: "successfully deleted",
            data: data,
        });
    } catch (err) {
        res.status(500).json({
            status: "error",
            message: "internal error",
            data: null,
        });
    }
}

module.exports = {
    registerUsers,
    updateUsers,
    deletesUsers,
    getUsers,
};
```

`userModels.js` code .

```
const mongoose = require("mongoose");
const user = new mongoose.Schema(
    {
        firstName: { type: String, required: true },
        lastName: { type: String, required: true },
        email: { type: String, required: true, unique: true },
        password: { type: String, required: true },
        isVerified: { type: Boolean, required: true, default: false },
        dateOfBirth: { type: Date, required: true },
        role: { type: String, enum: ["superAdmin", "admin", "moderator"] },
    },
    { timestamps: true }
);

module.exports = mongoose.model("users", user);
```

`authRoute.js` code .

```
const express = require("express");
const { loginUser } = require("../controller/loginController");

const router = express.Router();

router.post("/userAuth", loginUser);

module.exports = router;
```

`emailSendRoute.js` code .

```
const express = require("express");
const { sendEmail } = require("../utils/emailSender");
const router = express.Router();

router.get("/:email", async (req, res) => {
    try {
        const { email } = req.params;
        let result = await sendEmail(
            email,
            "Register successfully",
            "You have been registered successfully in Authentication system. Please verify your
email click on <a href='http://localhost:3000/verify/id'>verify</a>"
        );
        res.send(result);
    } catch (err) {
        res.send(err.message);
    }
});
```

```
module.exports = router;
```

`user.js` code.

```
const express = require("express");
const {
    registerUsers,
    updateUsers,
    deletesUsers,
    getUsers,
} = require("../controller/userController");
const router = express.Router();

router.get("/users", getUsers);
router.post("/users", registerUsers);
router.put("/users/:id", updateUsers);
router.delete("/users/:id", deletesUsers);

module.exports = router;
```

`verifyRoutes` code.

```
const express = require("express");
const userModels = require("../models/userModels");
const { sendEmail } = require("../utils/emailSender");
const router = express.Router();

router.get("/:id", async (req, res) => {
    try {
        let { id } = req.params;
        let user = await userModels.findByIdAndUpdate(id, {
            $set: { isVerified: true },
        });
        if (!user.isVerified) {
            res.status(200).send({
                status: "ok",
                message: "successfully Verified your Email ...",
                data: {
                    firstName: user.firstName,
                    lastName: user.lastName,
                    email: user.email,
                    dateOfBirth: user.dateOfBirth,
                },
            });
        } else {
            res.status(200).send({
                status: "ok",
                message: "Email is Already verified.",
                data: {
                    firstName: user.firstName,
                    lastName: user.lastName,
                    email: user.email,
                    dateOfBirth: user.dateOfBirth,
                },
            });
        }
        await sendEmail(
            user.email,
            "Email Verified",
            "successfully Verified your Email ..."
        );
    } catch (err) {
        res.status(505).send({
            status: "error",
            message: "internal server error ",
            data: null,
        });
    }
});

module.exports = router;
```

`emailSender.js` code.

```
const nodemailer = require("nodemailer");
require("dotenv").config();
async function sendEmail(email, subject, text) {
    try {
        const transporter = nodemailer.createTransport({
            port: process.env.NODE_PORT,
            service: process.env.SERVICE,
            host: process.env.HOST,
            secure: true,
            auth: {
                user: process.env.EMAIL,
                pass: process.env.EMAIL_PASSWORD,
            },
        });
        await transporter.sendMail({
            from: `AMADIRFAN <${process.env.EMAIL}>`,
            to: email,
            subject: subject,
            html: ` <h3>${text}</h3>`,
        });
        return "email sent successfully";
    } catch (err) {

        return err.message;
    }
}
module.exports = {
    sendEmail,
};
```

The End