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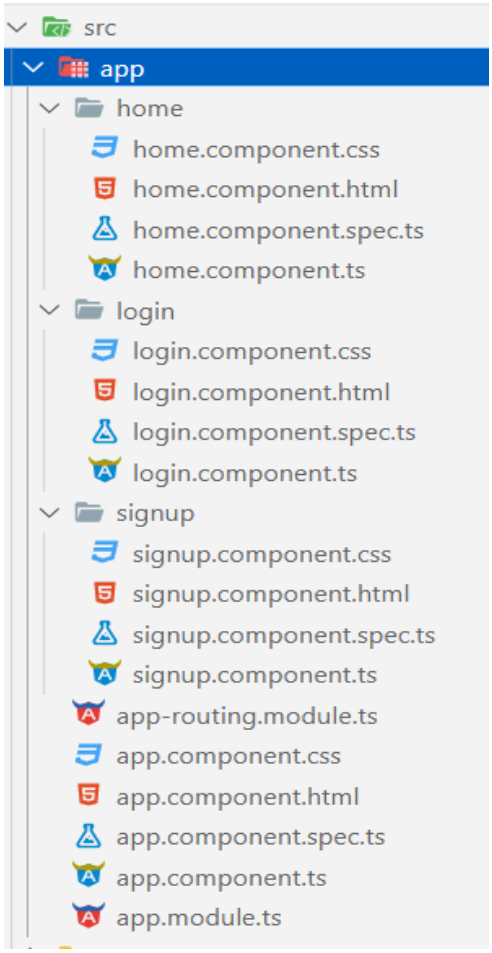
Assignment No. 2C

Directory Structure



index.html

```
<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>MyAssignment</title>
  <base href="/">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-
aFq/bzH65dt+w6FI2ooMVUpc+21e0SRygnTpmBvdBgSdnuTN7QbdgL+OapgHtvPp"
crossorigin="anonymous">
</head>
<body>
  <app-root></app-root>
</body>
</html>
```

app.component.ts

```
import { Component } from '@angular/core';

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'my-assignment';
}
```

app-routing.module.ts

```
import { NgModule } from '@angular/core';
import { RouterModule, Routes } from '@angular/router';
import { HomeComponent } from './home/home.component';
import { LoginComponent } from './login/login.component';
import { SignupComponent } from './signup/signup.component';

const routes: Routes = [
  {
    path: "",
    component: HomeComponent
  },
  {
    path: "login",
    component: LoginComponent
  },
  {
    path: "signup",
    component: SignupComponent
  },
];

@NgModule({
  imports: [RouterModule.forRoot(routes)],
  exports: [RouterModule]
})
export class AppRoutingModule { }
```

app.component.html

```
<router-outlet></router-outlet>
```

signup.component.ts

```
import { Component } from '@angular/core';
import { Router } from '@angular/router';
@Component({
    selector: 'app-signup',
    templateUrl: './signup.component.html',
```

```
    styleUrls: ['./signup.component.css']
})
export class SignupComponent {
    usernameError: string = "";
    passwordError: string = "";
    constructor(private router: Router) { }
    async getData(username: any, password: any) {
        this.usernameError = username ? "" : "Username is required";
        this.passwordError = password ? "" : "Password is required";
        if (username && password) {
            var myHeaders = new Headers();
            myHeaders.append("Content-Type", "application/json");
            var raw = JSON.stringify({
                "username": username,
                "password": password
            });
            var requestOptions: Object = {
                method: 'POST',
                headers: myHeaders,
                body: raw,
                redirect: 'follow'
            };
            fetch("http://localhost:2324/signup", requestOptions)
                .then(response => {
                    if (response.ok) {
                        return response.json();
                    } else {
                        this.usernameError = "Username Already Exists";
                        throw Error("Not OK")
                    }
                })
                .then(result => {
                    if (result.token) {
                        document.cookie = "jwt=" + result.token
                        localStorage.setItem("user", JSON.stringify(result.user))
                        this.router.navigate(['']);
                    }
                })
                .catch(error => console.log('error', error));
        }
    }
}
```

signup.component.html

```
<div class="container py-5">
    <div class="col-12 col-sm-10 col-md-6 col-lg-4 m-auto border shadow rounded p-4">
        <h3 class="mb-4 pb-2 border-bottom">User Signup</h3>
        <div class="mb-3">
            <label for="username" class="form-label">username</label>
```

```
            <input type="username" class="form-control" name="username" #username aria-
describedby="usernameHelpId" placeholder="abc">
            <small id="usernameHelpId" class="form-text text-
danger">{{usernameError}}</small>
        </div>
        <div class="mb-3">
            <label for="" class="form-label">Password</label>
            <input type="password" class="form-control" name="password" #password aria-
describedby="passwordHelpId" placeholder="Your Password">
            <small id="passwordHelpId" class="form-text text-
danger">{{passwordError}}</small>
        </div>
        <button type="button" class="btn btn-primary" #loginBtn
(click)="getData(username.value, password.value)">Login</button>
        <br>
        <hr />
        <a href="/login">Already Have An Account?</a>
    </div>
</div>
```

login.component.ts

```
import { Component } from '@angular/core';
import { Router } from '@angular/router';
@Component({
    selector: 'app-login',
    templateUrl: './login.component.html',
    styleUrls: ['./login.component.css']
})
export class LoginComponent {
    usernameError: string = "";
    passwordError: string = "";
    constructor(private router: Router) {
    async getData(username: any, password: any) {
        this.usernameError = username ? "" : "Username is required";
        this.passwordError = password ? "" : "Password is required";
        if (username && password) {
            var myHeaders = new Headers();
            myHeaders.append("Content-Type", "application/json");
            var raw = JSON.stringify({
                "username": username,
                "password": password
            });
            var requestOptions: Object = {
                method: 'POST',
                headers: myHeaders,
                body: raw,
                redirect: 'follow'
            };
            fetch("http://localhost:2324/login", requestOptions)
                .then(response => response.json())
                .then(result => {
```

```
                    if (result.token) {
                        document.cookie = "jwt=" + result.token
                        localStorage.setItem("user", JSON.stringify(result.user))
                        this.router.navigate(['']);
                    } else {
                        this.usernameError = result.message == "Username Not Found" ?
result.message : "";
                        this.passwordError = result.message == "Incorrect Password" ?
result.message : "";
                    }
                })
                .catch(error => console.log('error', error));
        }
    }
}
```

login.component.html

```
<div class="container py-5">
    <div class="col-12 col-sm-10 col-md-6 col-lg-4 m-auto border shadow rounded p-4">
        <h3 class="mb-4 pb-2 border-bottom">User Login</h3>
        <div class="mb-3">
            <label for="username" class="form-label">username</label>
            <input type="username" class="form-control" name="username" #username aria-
describedby="usernameHelpId" placeholder="abc">
            <small id="usernameHelpId" class="form-text text-
danger">{{usernameError}}</small>
        </div>
        <div class="mb-3">
            <label for="" class="form-label">Password</label>
            <input type="password" class="form-control" name="password" #password aria-
describedby="passwordHelpId" placeholder="Your Password">
            <small id="passwordHelpId" class="form-text text-
danger">{{passwordError}}</small>
        </div>
        <button type="button" class="btn btn-primary" #loginBtn
(click)="getData(username.value, password.value)">Login</button>
        <br>
        <hr />
        <a href="/signup">Create An Account?</a>
    </div>
</div>
```

home.component.ts

```
import { Component } from '@angular/core';
import { CookieService } from 'ngx-cookie-service';
import { Router } from '@angular/router';

@Component({
    selector: 'app-home',
    templateUrl: './home.component.html',
    styleUrls: ['./home.component.css']
```

```
})
export class HomeComponent {
    message: string
    constructor(private cookieService: CookieService, private router: Router) {
        let user: string = localStorage.getItem("user") ?? "{}";
        const userDetails = JSON.parse(user)
        this.message = userDetails.username ? "Hello " + userDetails.username : "LOGIN";
        this.validate()
    }
    validate() {
        // verify
        const jwt = this.cookieService.get('jwt');
        console.log(jwt)
        const myHeaders = new Headers({
            'Content-Type': 'application/json',
            'Cookie': `jwt=${jwt}`
        });
        var requestOptions: Object = {
            method: 'GET',
            headers: myHeaders,
            redirect: 'follow',
            credentials: 'include'
        };
        fetch("http://localhost:2324", requestOptions)
            .then(response => {
                if (!response.ok) {
                    throw new Error(String(response.status));
                }
                return response.json();
            })
            .then(result => {
                console.log(result)
                if (result.message == "Token is not valid") {
                    // redirect to login
                    localStorage.removeItem("user")
                    this.router.navigate(['/login']);
                }
                else if (result.message == "Token is not provided") {
                    // redirect to login
                    localStorage.removeItem("user")
                    this.router.navigate(['/login']);
                }
                if (this.message == "LOGIN") {
                    this.router.navigate(['/login']);
                }
            })
            .catch(error => console.log('error', error));
    }
    logout() {
        localStorage.removeItem("user")
        this.router.navigate(['/login']);
    }
}
```

home.component.html

```
<p class="text-center h1 m-5">{{message}}</p>
<div class="text-center">
    <button class="btn btn-danger my-5" (click)="logout()">LogOUT</button>
</div>
```

BACKEND: index.js

```
import express from "express"
import User from "./User.js"
import cookieParser from "cookie-parser";
import jwt from "jsonwebtoken";
import connection from "./mongodb.js";
import cors from 'cors';
import dotenv from "dotenv"
dotenv.config();
const app = express();
//middleware
app.use(express.json());
app.use(cookieParser());
app.use(function (req, res, next) {
    res.setHeader('Access-Control-Allow-Origin', '*');
    res.setHeader('Access-Control-Allow-Methods', 'GET, POST, OPTIONS, PUT, PATCH,
DELETE');
    res.setHeader('Access-Control-Allow-Headers', 'X-Requested-With,content-type');
    res.setHeader('Access-Control-Allow-Credentials', true);
    next();
});
app.use(cors({
    origin: 'http://localhost:4200',
    credentials: true
}));
const authMiddleware = (req, res, next) => {
    const jwToken = req.cookies.jwt
    if (jwToken) {
        jwt.verify(jwToken, "This is My Secret", (error, decode) => {
            if (error) {
                res.json({ message: "Token is not valid" })
            } else {
                req._id = decode._id;
                next()
            }
        })
    } else {
        res.json({ message: "Token is not provided" })
    }
}
// functions
async function createToken(_id, res) {
    const token = await jwt.sign({ _id }, "This is My Secret", {
        expiresIn: "2d"
```

```
    })
    res.cookie("jwt", token, {
        maxAge: 1000 * 60 * 60 * 24 * 2,
        httpOnly: true
    });
    return token;
}
app.post("/login", async (req, res) => {
    try {
        const user = await User.login(req.body);
        if (user == 1) {
            res.clearCookie("jwt");
            return res.send({ message: "Username Not Found" })

        } else if (user == 2) {
            res.clearCookie("jwt");
            return res.send({ message: "Incorrect Password" })
        }

        const token = await createToken(user._id, res)
        return res.send({ user, token });
    } catch (error) {
        res.status(404).send({ error })
    }
})
app.post("/signup", async (req, res) => {
    const { username, password } = req.body;
    if (username && password) {
        try {
            const user = await User.create({ username, password });
            const token = await createToken(user._id, res)
            return res.send({ user, token });
        } catch (error) {
            return res.status(404).send({ error })
        }
    } else {
        return res.status(404).json({ message: "`username` and `password` are required"
})
    }
})

app.get("/", authMiddleware, async (req, res) => {
    try {
        const user = await User.findOne({ _id: req._id })
        res.status(200).json({ username: user.username })
    } catch (error) {
        res.status(494).json({ error })
    }
})
connection.then(() => {
    app.listen(2324, () => {
        console.log("server started: http://localhost:2324")
    })
```

```
}).catch(err => {
    console.log(err)
})
```

BACKEND: User.js

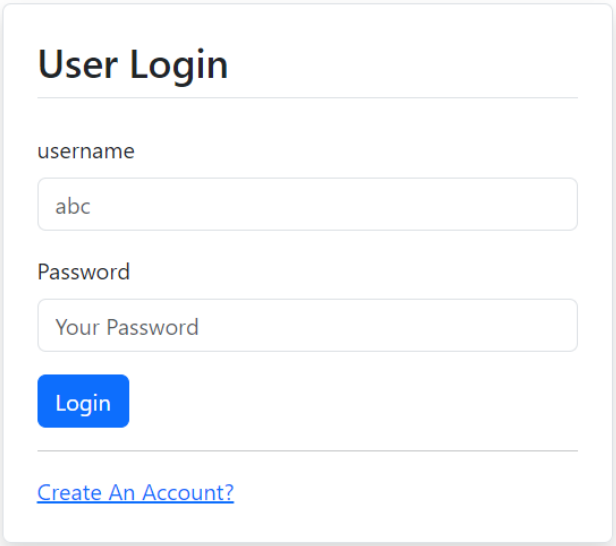
```
import mongoose from "mongoose"
import bcrypt from "bcrypt"
const User = new mongoose.Schema({
    username: {
        type: String,
        unique: true,
        trim: true,
        required: true
    },
    password: {
        type: String,
        trim: true,
        required: true
    }
});
User.pre("save", async function (next) {
    this.password = await bcrypt.hash(this.password, 10);
    next();
});
User.statics.login = async function ({ username, password }) {
    try {
        const user = await this.findOne({ username })
        if (user) {
            return await bcrypt.compare(password, user.password) ? user : 2
        } else {
            return 1;
        }
    } catch (error) {
        console.log(error)
    }
}
export default mongoose.model("user", User);
```

BACKEND:mongodb.js

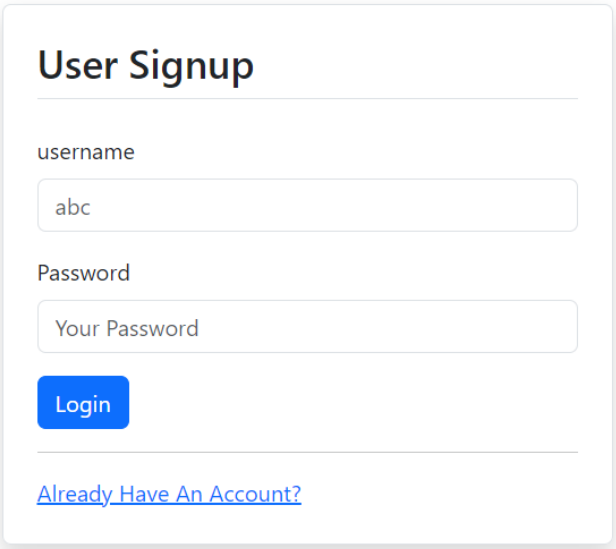
```
import mongoose from "mongoose";
import dotenv from "dotenv"
dotenv.config();

const connection = mongoose.connect(process.env.DB_URI)
export default connection;
```

OUTPUT:

Login Page:



Signup Page:



Home Page (After Login/Signup):