

Assignment: Authentication

Angular Authentication Components

Objective

Your task is to create authentication components for a web application using Angular. Specifically, you will build registration and login components that allow users to create an account and log in.

Requirements

1. Create Components

- a. Generate the following Angular components:
 - i. **RegisterComponent**
 - ii. **LoginComponent**

2. Implement Register Component

- a. Register Form Fields

The registration form should have the following fields:

- **Full Name** (*fullName*): Required
- **Email** (*email*): Required and must be a valid email address
- **Password** (*password*): Required and must be at least 6 characters long
- **Confirm Password** (*confirmPassword*): Required
- **Role** (*role*): Required, should be selected from Admin, Editor, or Viewer

- b. Register Form Template

Create the HTML template for the registration form using the provided fields. The form should have a submit button that triggers the **onSubmit()** method to call the Register API **if the form is valid**.

3. Implement Login Component

a. Login Form Fields

The login form should have the following fields:

- i. **Email** (*email*): Required and must be a valid email address
- ii. **Password** (*password*): Required and must be at least 6 characters long

b. Login Form Template

Create the HTML template for the login form using the provided fields. The form should have a submit button that triggers the **onSubmit()** method to call the Login API **if the form is valid**.



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Sign up

John Doe

Full Name is required

Your Email

Valid email is required

Password

Password must be at least 6 characters long

Repeat your password

Select Role


Role is required

☐

I agree to all statements in [Terms of service](#)
You must agree to the terms

Register

[I am already a member](#)



Register

Sign in

Your Email


Password

☐

Remember me

Log in

[Create an account](#)



Login

.NET Backend Implementation for Authentication

Objective

Your task is to create a backend API for the Angular authentication components using .NET. The backend will handle user registration and login, and ensure that passwords are securely stored using hashing techniques.

Requirements

1. Setup .NET Project

2. Implement User Model

Create a **User** entity that will store user information:

- **UserId** (GUID): Unique identifier for each user.
- **Full Name** (string): Required.
- **Email** (string): Required and must be unique.
- **Password** (string): Required, should store the hashed version of the user's password.
- **Role** (enum): Should be one of Admin, Editor, or Viewer.

3. Implement User Registration Endpoint

a. Register Endpoint

Create a **POST** `/api/auth/register` endpoint.

Accept a registration request containing **FullName**, **Email**, **Password**, and **Role**.

Hash the password using a secure hashing algorithm before saving the user.

4. Implement User Login Endpoint

a. Login Endpoint

Create a **POST** `/api/auth/login` endpoint.

Accept a login request containing **Email** and **Password**.