Customer Management System – User Guide

- ➢ **Frontend : React.js, Tailwind CSS with JWT Authentication**
- ➢ **Backend : Dot Net Core, Web API, Entity Framework Core, SQL Server with Clear Architecture**

I. Frontend – React.js, Tailwind CSS with JWT Authentication

✓ React CMS Setup and Run Guide

◆ 1. Clone the Project from GitHub

Open a terminal and run:

```
git clone https://github.com/SheikGH/CMS_React_Frontend.git
```

Example:

```
git clone https://github.com/SheikGH/CMS_React_Frontend.git
```

◆ 2. Navigate to the Project Folder

```
cd CMS_React_Frontend
```

◆ 3. Create and Configure `.env` File

In the root of the project (inside `CMS_React_Frontend /`), create a file named `.env` if it doesn't already exist.

Add the following line to `.env`:

```
REACT_APP_API_URL=https://localhost:7067/api
```

This will make sure your React app communicates with the correct backend API.

◆ 4. Install Node.js (if not already installed)

Make sure you have **Node.js (v14+ or v16+)** and **npm** installed.

To check:

```
node -v
npm -v
```

To install: https://nodejs.org/

◆ 5. Install Project Dependencies

```
npm install
```

This will install all required packages listed in `package.json`.

◆ 6. Start the React Development Server

```
npm start
```

This will start your React app at:

```
http://localhost:3000
```

◆ 7. Make Sure Backend Is Running

Ensure your .NET Core API project is running at:

```
https://localhost:7067/swagger/index.html
```

If you're using Visual Studio:

- Set the API project as **Startup Project**
- Press `F5` or click **Start Debugging**

◆ 8. Common Pages and Actions

Page	Path	Description
Register Page	`/register`	Add new customer (registers user)
Login Page	`/login`	Login with JWT token, saved in `localStorage`
Customer List Page	`/customers`	View, Edit, Delete customer records
Logout	-	Clears token, redirects to Login page

□ Troubleshooting Tips

- If you get **CORS errors**, make sure your .NET backend has CORS enabled:

```
services.AddCors(options =>
{
    options.AddPolicy("AllowAll",
        builder =>
        {
            builder.AllowAnyOrigin()
```

```
                        .AllowAnyHeader()
                        .AllowAnyMethod();
            });
    });

    app.UseCors("AllowAll");
```

- If `.env` changes are not reflected, **restart the server** after editing the `.env` file.

I. Frontend – React.js, Tailwind CSS with JWT Authentication

✅ 1. Register Page: `http://localhost:3000/register`

📌 Features:

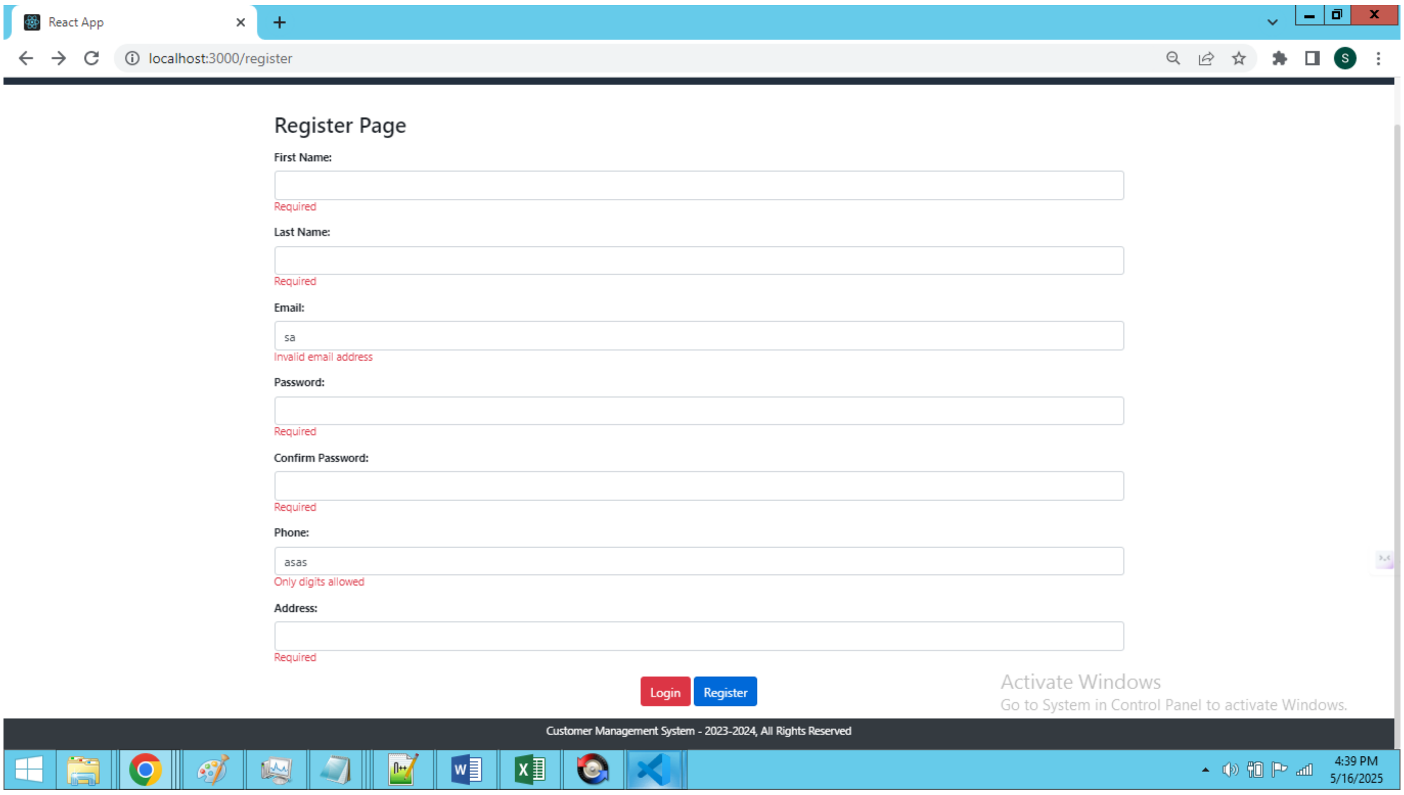
- Add a new customer with proper form validation.
- Submit valid customer data to the backend API and store it in the database.

✔️ Validations:

- **Required fields:** First Name, Last Name, Email, Phone, Address, Password
- **Email format check**
- **Password strength:** Example: At least 6–8 characters, with uppercase, lowercase, number, and special character.

✔️ Flow:

1. User fills out the form.
2. If any field is invalid → show validation errors.
3. If all fields are valid → POST request to API (e.g., `/api/register`).
4. On success → redirect to Login page or show success message.


React App

localhost:3000/register

Register Page

First Name:

Required

Last Name:

Required

Email:

sa

Invalid email address

Password:

Required

Confirm Password:

Required

Phone:

asas

Only digits allowed

Address:

Required

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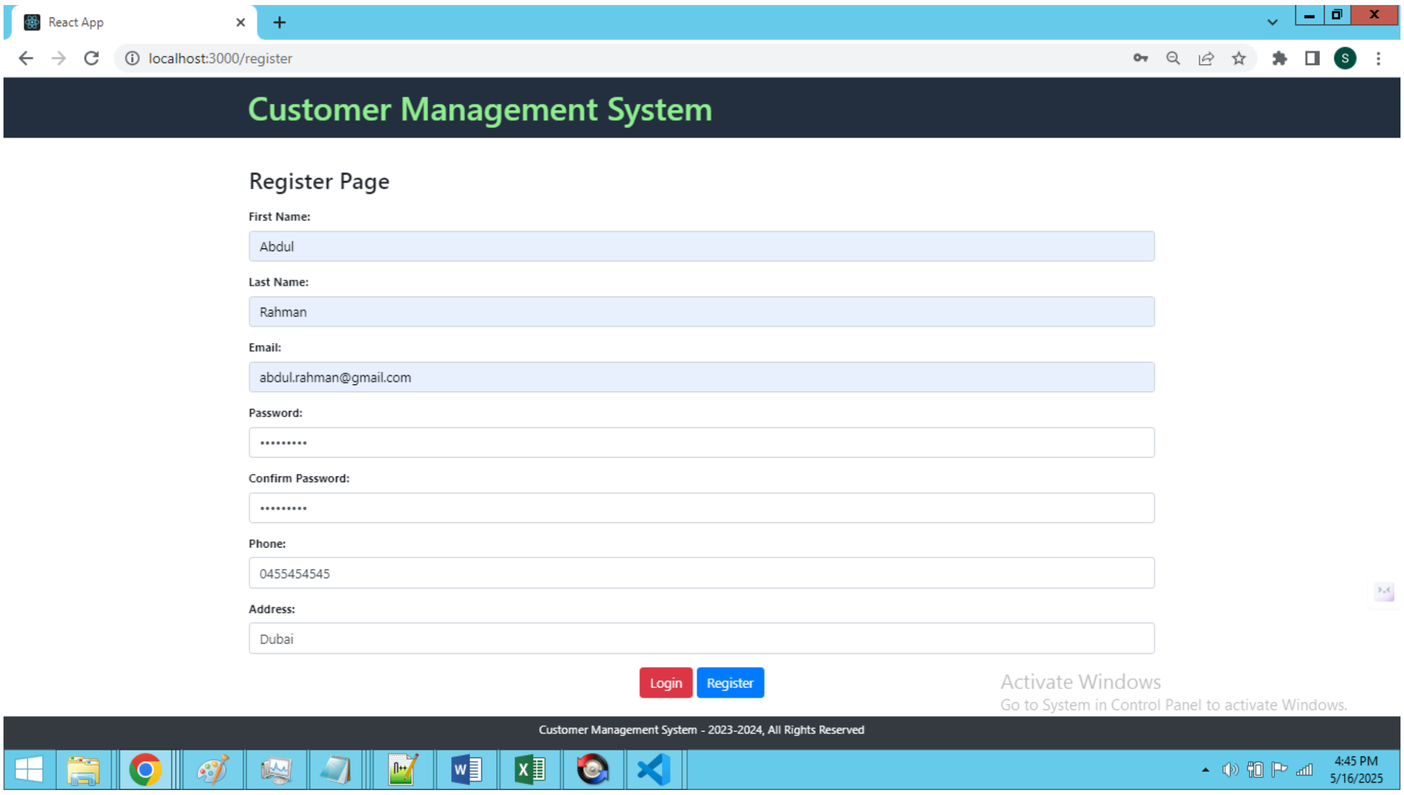
React App

localhost:3000/register

Customer Management System

Register Page

First Name: Abdul

Last Name: Rahman

Email: abdul.rahman@gmail.com

Password: •••••••••

Confirm Password: •••••••••

Phone: 0455454545

Address: Dubai

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✓ 2. Login Page: `http://localhost:3000/login`

📌 Features:

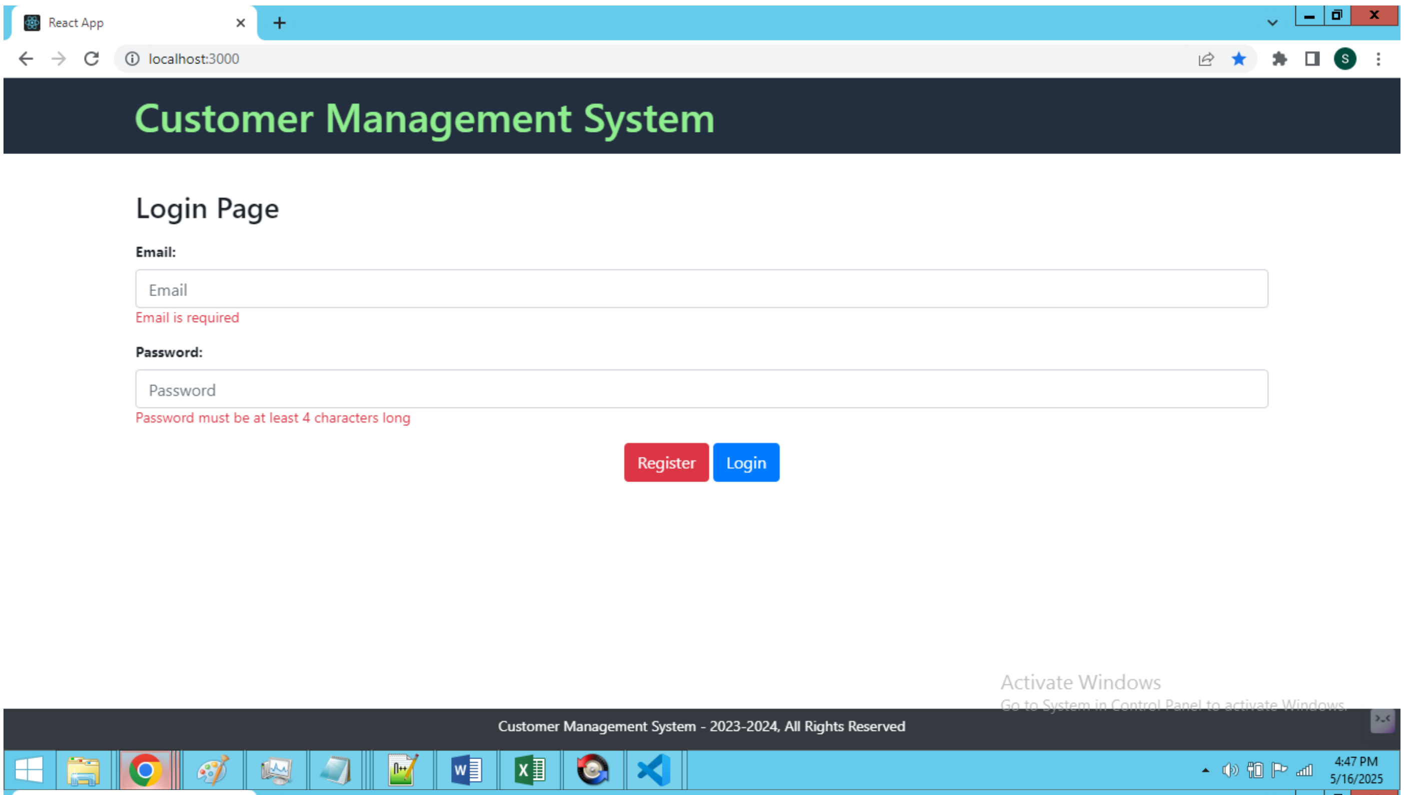
- Authenticate user using email and password.
- Receive JWT from API and store in localStorage.

✔️ Validations:

- Email is required and must be valid.
- Password is required.

✔️ Flow:

1. User enters login credentials.
2. If invalid format → show client-side validation errors.
3. If wrong credentials → show API error message.
4. If credentials are correct:
    - Backend returns JWT token.
    - Store token in `localStorage`.
    - Redirect to `/customer-list`.



Customer Management System

Login Page

Email:

Email

Email is required

Password:

Password

Password must be at least 4 characters long

Register Login

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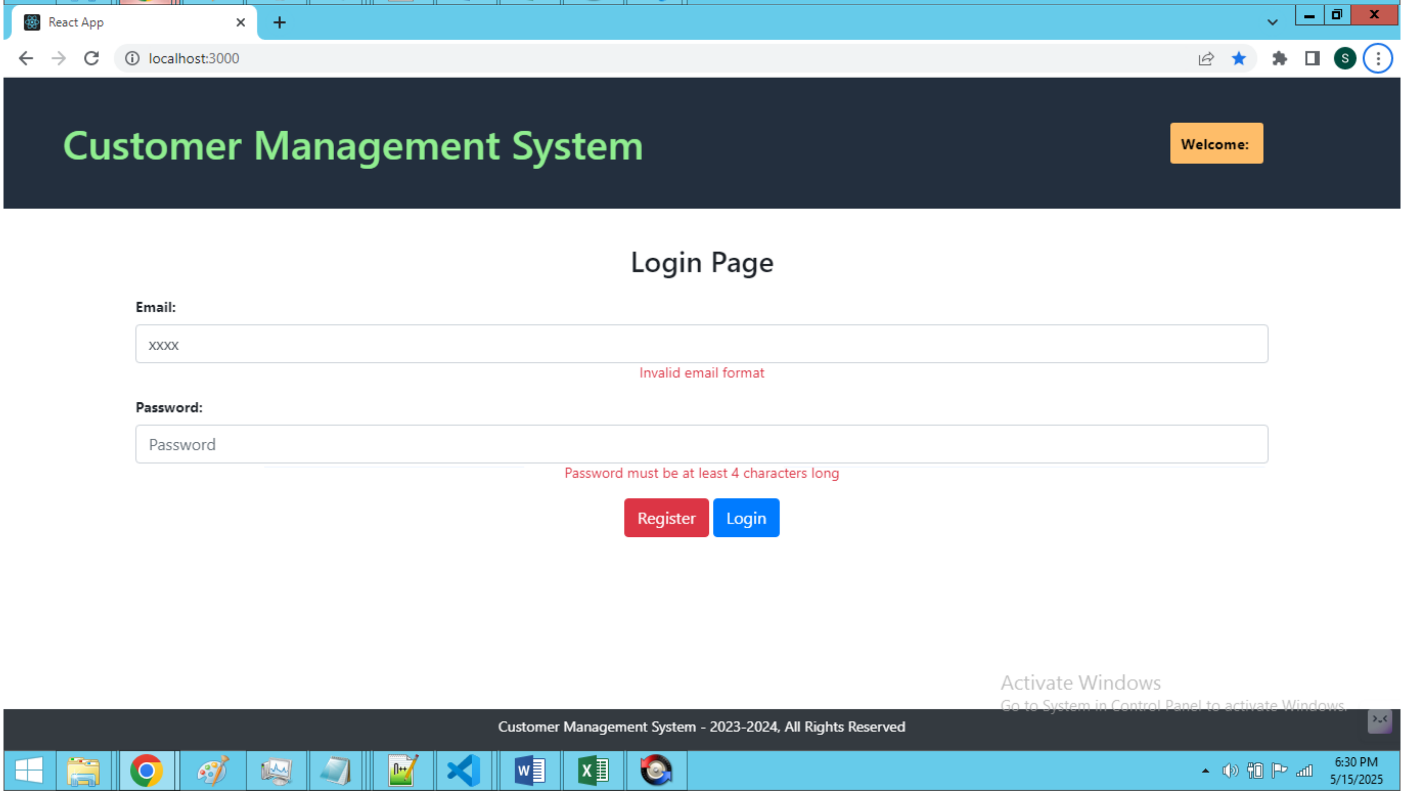

Customer Management System

Welcome:

Login Page

Email:

xxxx

Invalid email format

Password:

Password

Password must be at least 4 characters long

Register Login

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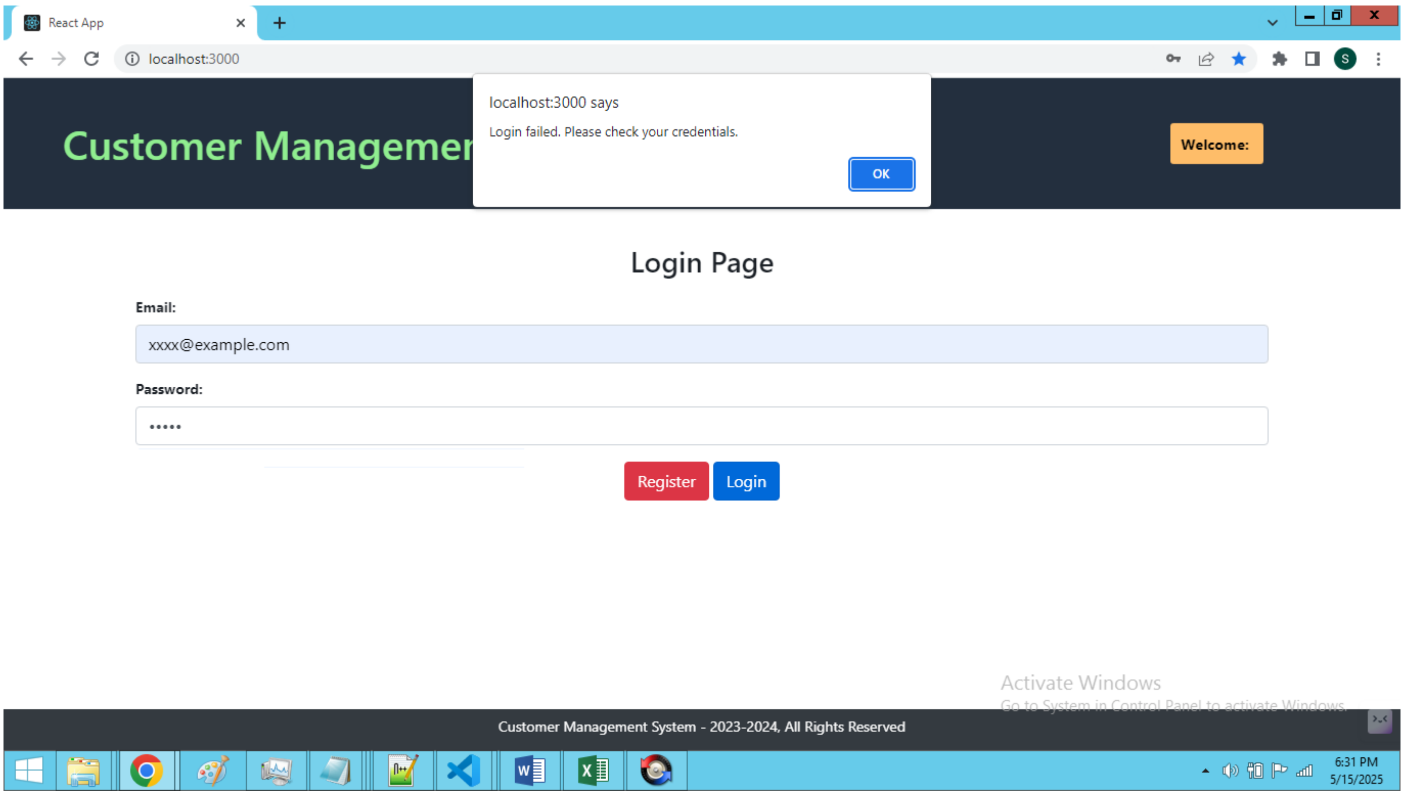

React App

localhost:3000

localhost:3000 says

Login failed. Please check your credentials.

OK

Customer Managemen

Welcome:

Login Page

Email:

xxxx@example.com

Password:

•••••

Register Login

Activate Windows
Go to System in Control Panel to activate Windows.

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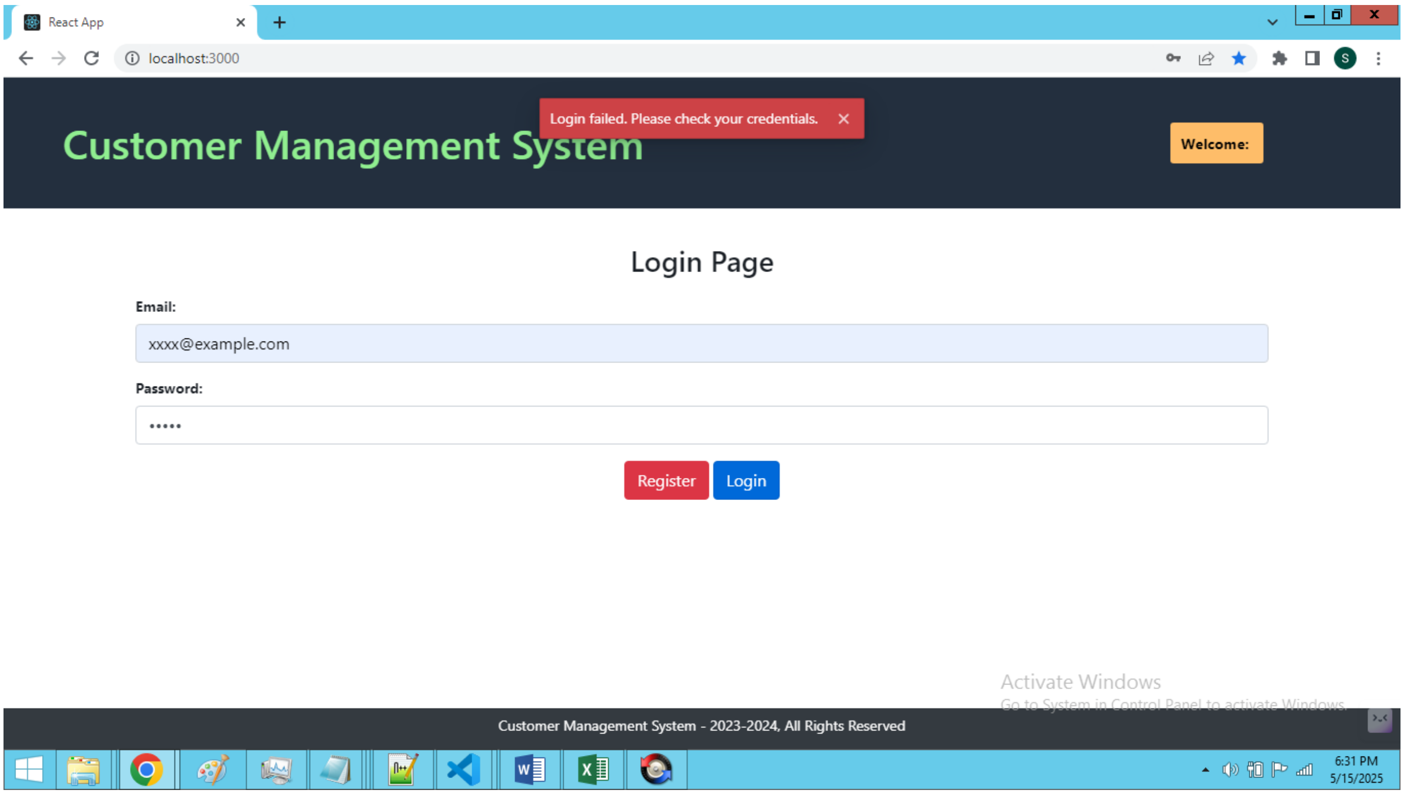
6:31 PM
5/15/2025



React App

localhost:3000

Login failed. Please check your credentials. ×

Customer Management System

Welcome:

Login Page

Email:

xxxx@example.com

Password:

•••••

Register Login

Activate Windows
Go to System in Control Panel to activate Windows.

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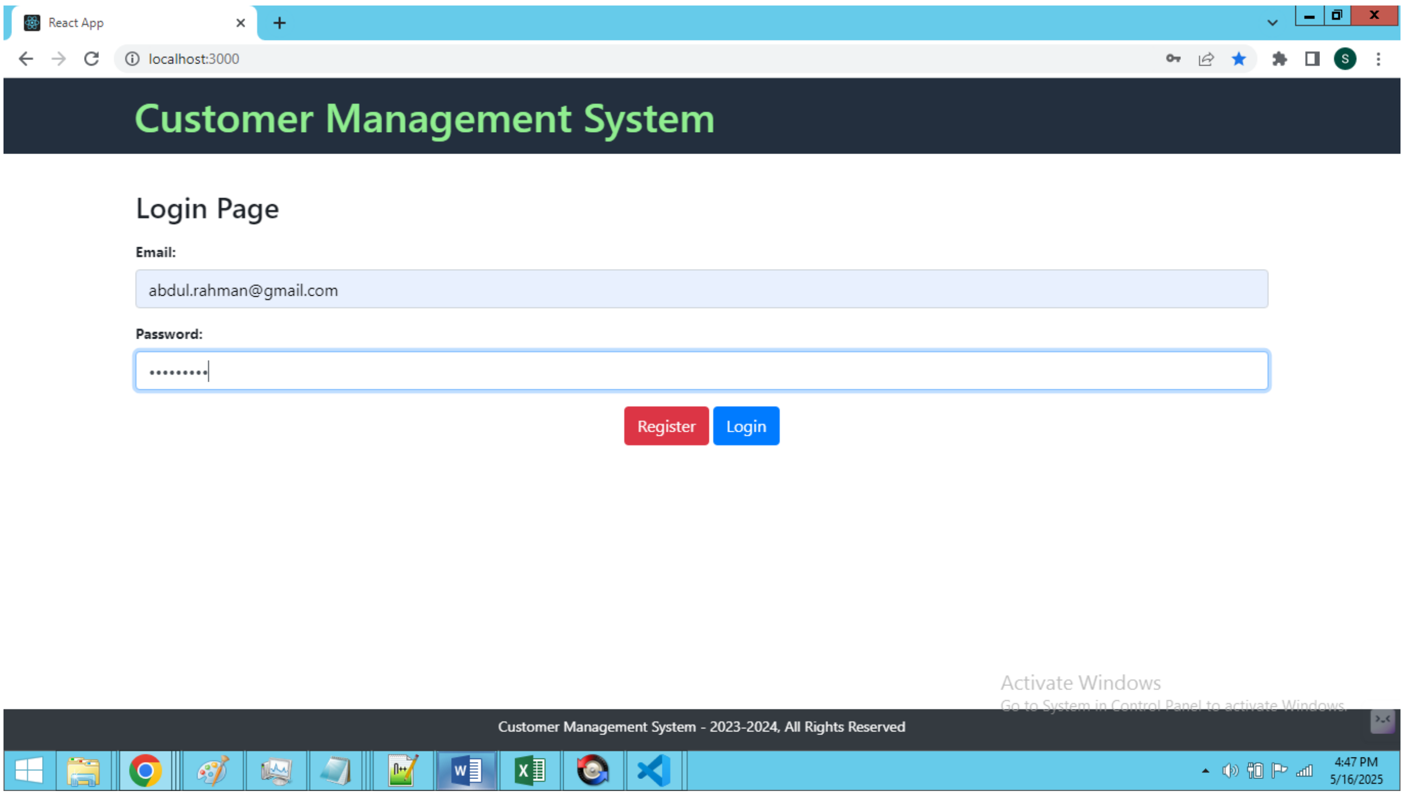
6:31 PM
5/15/2025


React App
localhost:3000

Customer Management System

Login Page

Email:
abdul.rahman@gmail.com

Password:
•••••••••

Register Login

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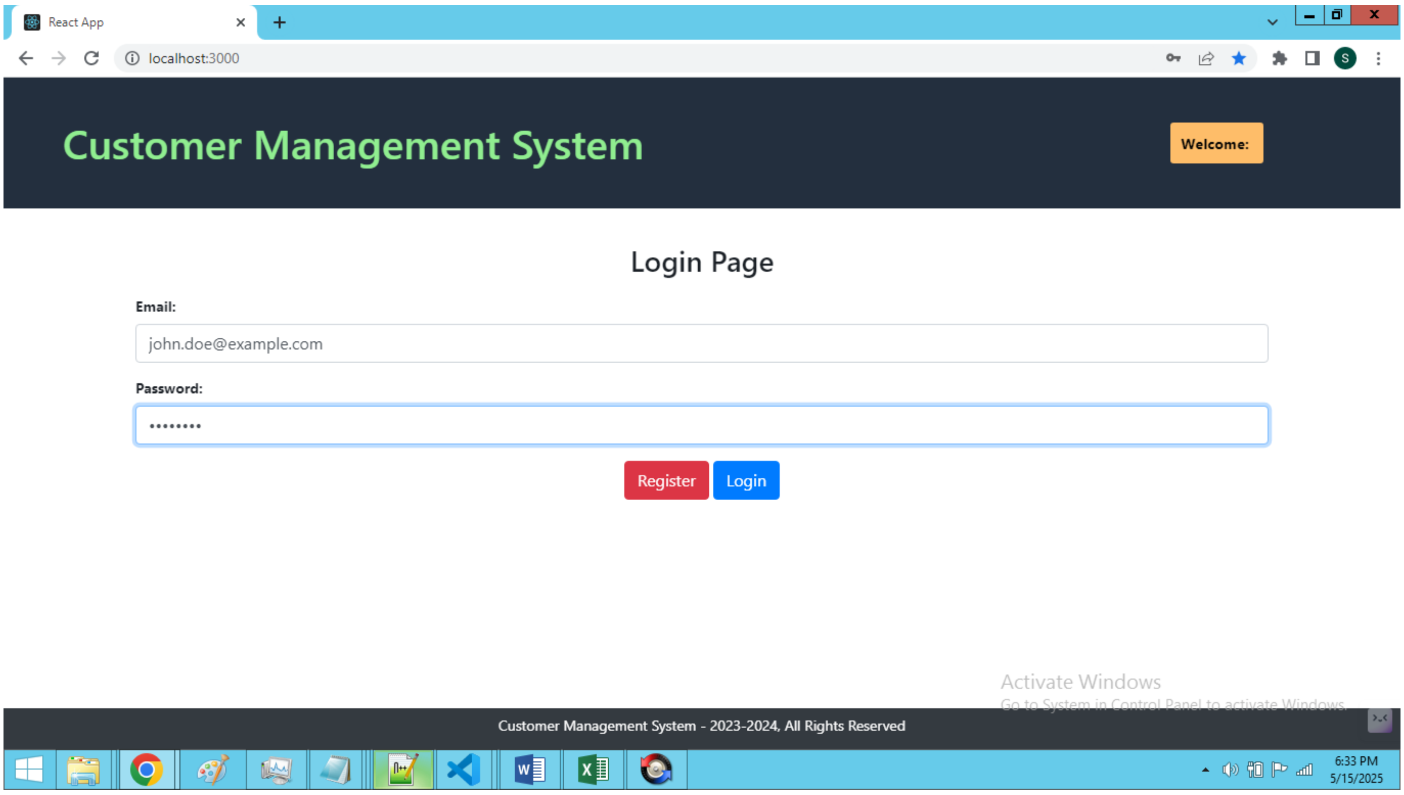
React App
localhost:3000

Customer Management System

Welcome:

Login Page

Email:
john.doe@example.com

Password:
••••••••

Register Login

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✓ 3. Customer List Page: `http://localhost:3000/customer-list`

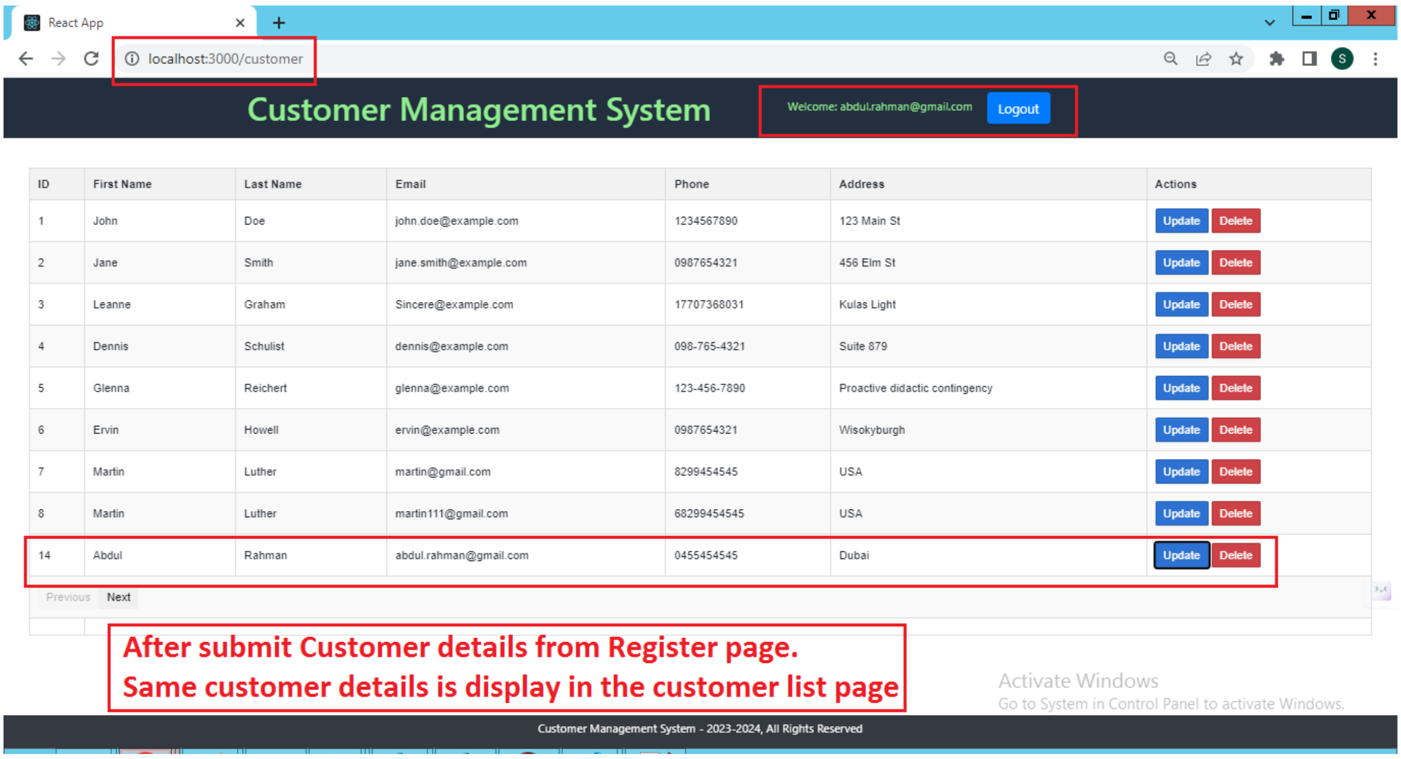
📌 Features:

- View, edit, delete customer.
- Require JWT token to access.

✓ Functionality:

View Customer:

- Fetch data from `/api/customers` using JWT token in headers.
- Display in table format.



React App

localhost:3000/customer

Customer Management System

Welcome: abdul.rahman@gmail.com Logout

ID	First Name	Last Name	Email	Phone	Address	Actions
1	John	Doe	john.doe@example.com	1234567890	123 Main St	Update Delete
2	Jane	Smith	jane.smith@example.com	0987654321	456 Elm St	Update Delete
3	Leanne	Graham	Sincere@example.com	17707368031	Kulas Light	Update Delete
4	Dennis	Schulist	dennis@example.com	098-765-4321	Suite 879	Update Delete
5	Glenna	Reichert	glenna@example.com	123-456-7890	Proactive didactic contingency	Update Delete
6	Ervin	Howell	ervin@example.com	0987654321	Wisokyburgh	Update Delete
7	Martin	Luther	martin@gmail.com	8299454545	USA	Update Delete
8	Martin	Luther	martin111@gmail.com	68299454545	USA	Update Delete
14	Abdul	Rahman	abdul.rahman@gmail.com	0455454545	Dubai	Update Delete

Previous Next

After submit Customer details from Register page.
Same customer details is display in the customer list page

Activate Windows
Go to System in Control Panel to activate Windows.

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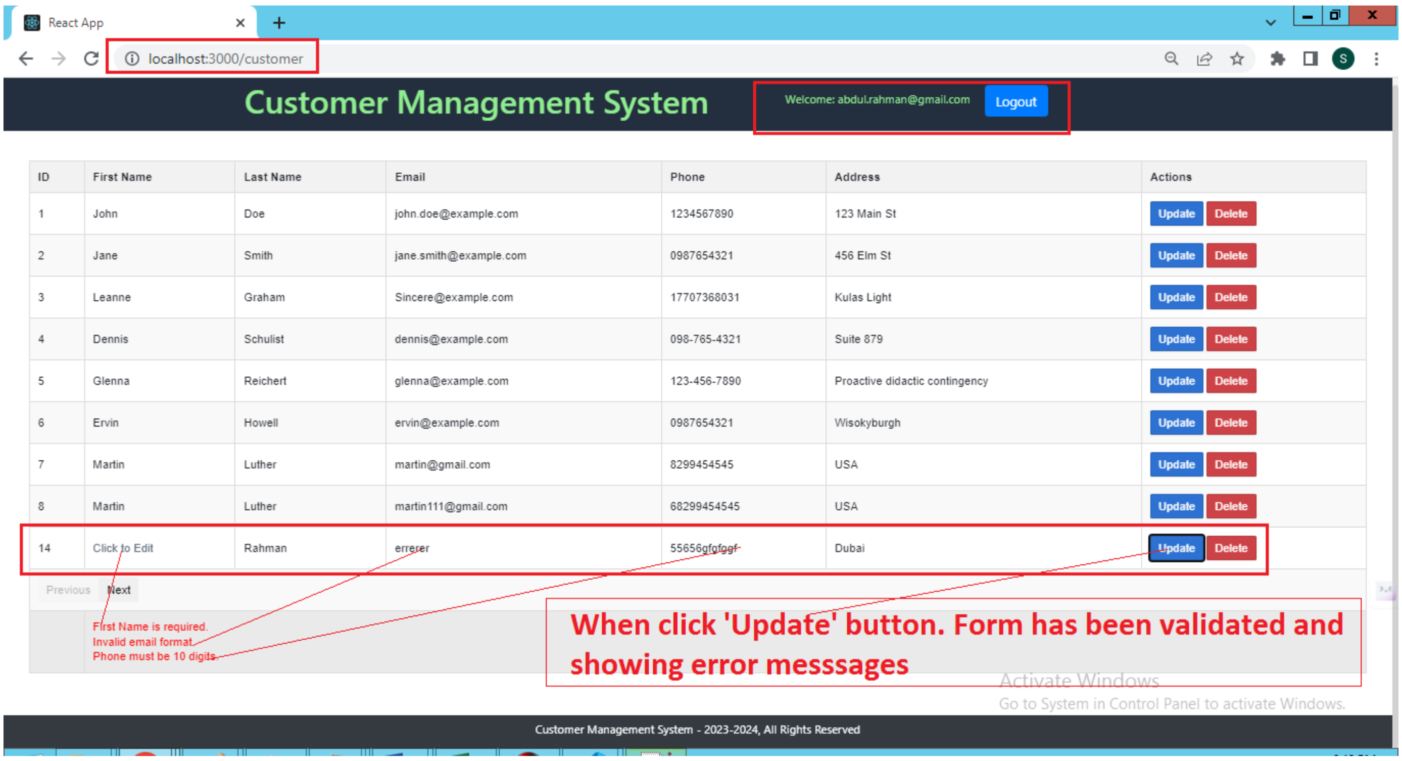
Edit Customer:

- Click on "Edit" → Inline form or Modal.
- Validate fields (same as Register).
- On valid input, PUT request to API.
- On success, reload or refresh list.



Customer Management System

Welcome: abdul.rahman@gmail.com Logout

ID	First Name	Last Name	Email	Phone	Address	Actions
1	John	Doe	john.doe@example.com	1234567890	123 Main St	Update Delete
2	Jane	Smith	jane.smith@example.com	0987654321	456 Elm St	Update Delete
3	Leanne	Graham	Sincere@example.com	17707368031	Kulas Light	Update Delete
4	Dennis	Schulist	dennis@example.com	098-765-4321	Suite 879	Update Delete
5	Glenna	Reichert	glenna@example.com	123-456-7890	Proactive didactic contingency	Update Delete
6	Ervin	Howell	ervin@example.com	0987654321	Wisokyburgh	Update Delete
7	Martin	Luther	martin@gmail.com	8299454545	USA	Update Delete
8	Martin	Luther	martin111@gmail.com	68299454545	USA	Update Delete
14	Click to Edit	Rahman	errerer	55656gfgfggf	Dubai	Update Delete

Previous Next

First Name is required.
Invalid email format.
Phone must be 10 digits.

When click 'Update' button. Form has been validated and showing error messsages

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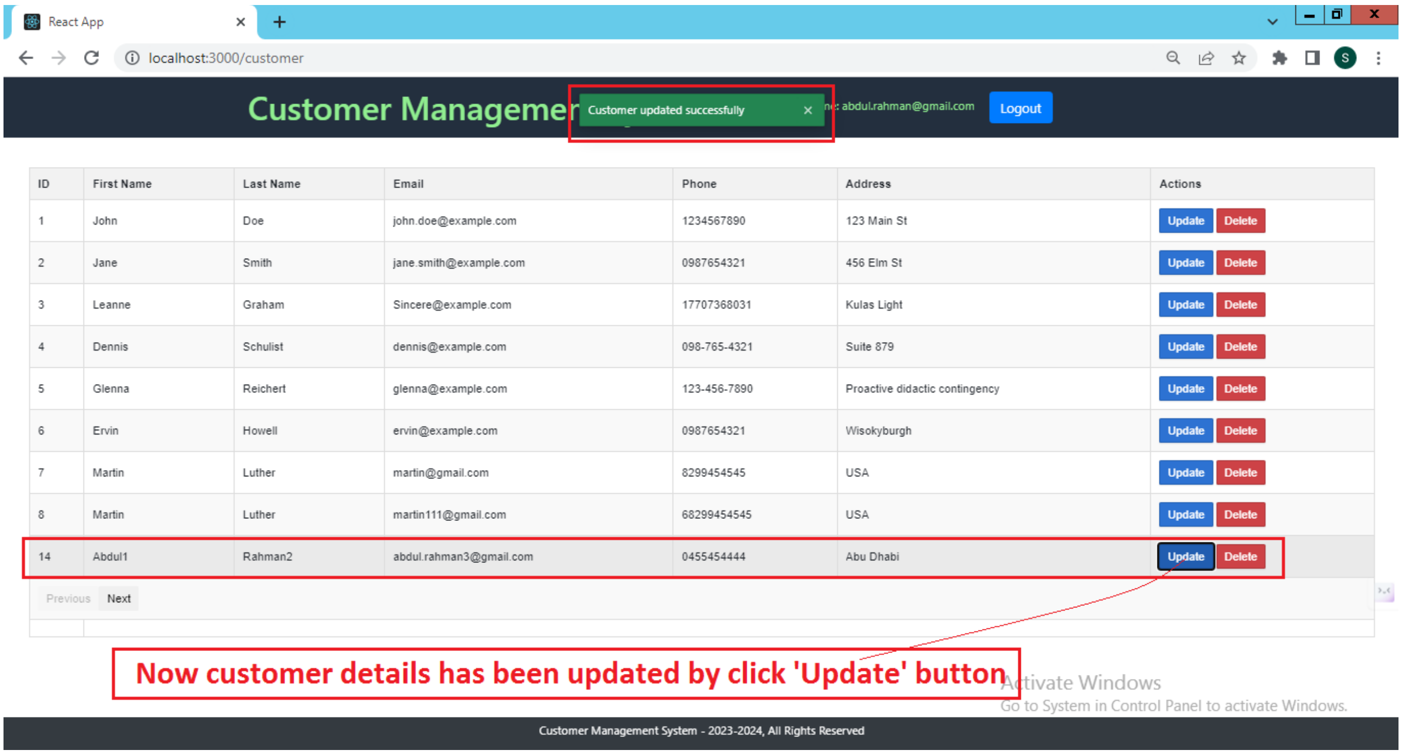

Customer Managemen

Customer updated successfully ×

abdul.rahman@gmail.com Logout

ID	First Name	Last Name	Email	Phone	Address	Actions
1	John	Doe	john.doe@example.com	1234567890	123 Main St	Update Delete
2	Jane	Smith	jane.smith@example.com	0987654321	456 Elm St	Update Delete
3	Leanne	Graham	Sincere@example.com	17707368031	Kulas Light	Update Delete
4	Dennis	Schulist	dennis@example.com	098-765-4321	Suite 879	Update Delete
5	Glenna	Reichert	glenna@example.com	123-456-7890	Proactive didactic contingency	Update Delete
6	Ervin	Howell	ervin@example.com	0987654321	Wisokyburgh	Update Delete
7	Martin	Luther	martin@gmail.com	8299454545	USA	Update Delete
8	Martin	Luther	martin111@gmail.com	68299454545	USA	Update Delete
14	Abdul1	Rahman2	abdul.rahman3@gmail.com	0455454444	Abu Dhabi	Update Delete

Previous Next

Now customer details has been updated by click 'Update' button

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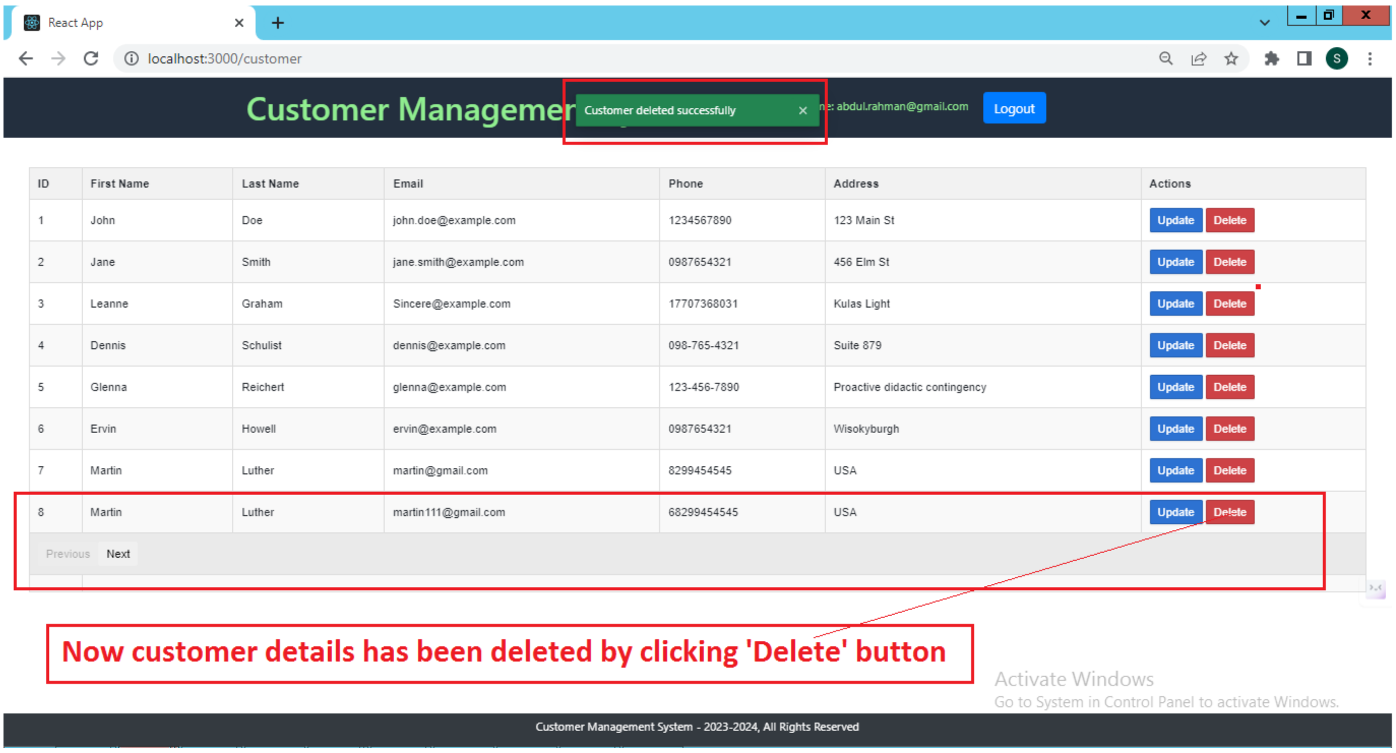
☐ **Delete Customer:**

- Click "Delete" → confirmation prompt.
- Send DELETE request with customer ID.
- On success, remove entry from table.



React App

localhost:3000/customer

Customer Managemer

Customer deleted successfully

e: abdul.rahman@gmail.com

ID	First Name	Last Name	Email	Phone	Address	Actions
1	John	Doe	john.doe@example.com	1234567890	123 Main St	Update Delete
2	Jane	Smith	jane.smith@example.com	0987654321	456 Elm St	Update Delete
3	Leanne	Graham	Sincere@example.com	17707368031	Kulas Light	Update Delete
4	Dennis	Schulist	dennis@example.com	098-765-4321	Suite 879	Update Delete
5	Glenna	Reichert	glenna@example.com	123-456-7890	Proactive didactic contingency	Update Delete
6	Ervin	Howell	ervin@example.com	0987654321	Wisokyburgh	Update Delete
7	Martin	Luther	martin@gmail.com	8299454545	USA	Update Delete
8	Martin	Luther	martin111@gmail.com	68299454545	USA	Update Delete

Now customer details has been deleted by clicking 'Delete' button

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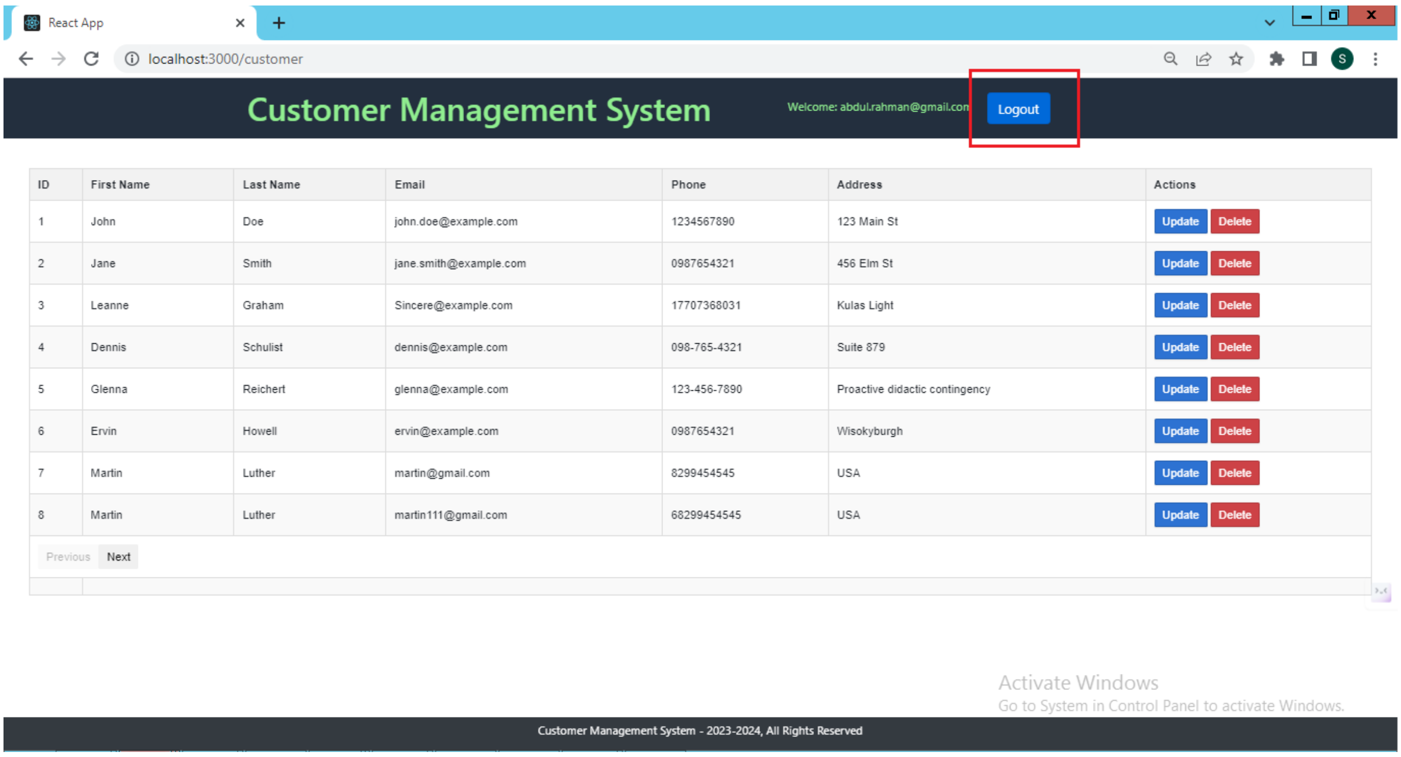
✅ 4. Logout

✔️ Flow:

- Click Logout → `localStorage.removeItem('token')`
- Redirect to `/login`



React App

localhost:3000/customer

Customer Management System

Welcome: abdul.rahman@gmail.com Logout

ID	First Name	Last Name	Email	Phone	Address	Actions
1	John	Doe	john.doe@example.com	1234567890	123 Main St	Update Delete
2	Jane	Smith	jane.smith@example.com	0987654321	456 Elm St	Update Delete
3	Leanne	Graham	Sincere@example.com	17707368031	Kulas Light	Update Delete
4	Dennis	Schulist	dennis@example.com	098-765-4321	Suite 879	Update Delete
5	Glenna	Reichert	glenna@example.com	123-456-7890	Proactive didactic contingency	Update Delete
6	Ervin	Howell	ervin@example.com	0987654321	Wisokyburgh	Update Delete
7	Martin	Luther	martin@gmail.com	8299454545	USA	Update Delete
8	Martin	Luther	martin111@gmail.com	68299454545	USA	Update Delete

Previous Next

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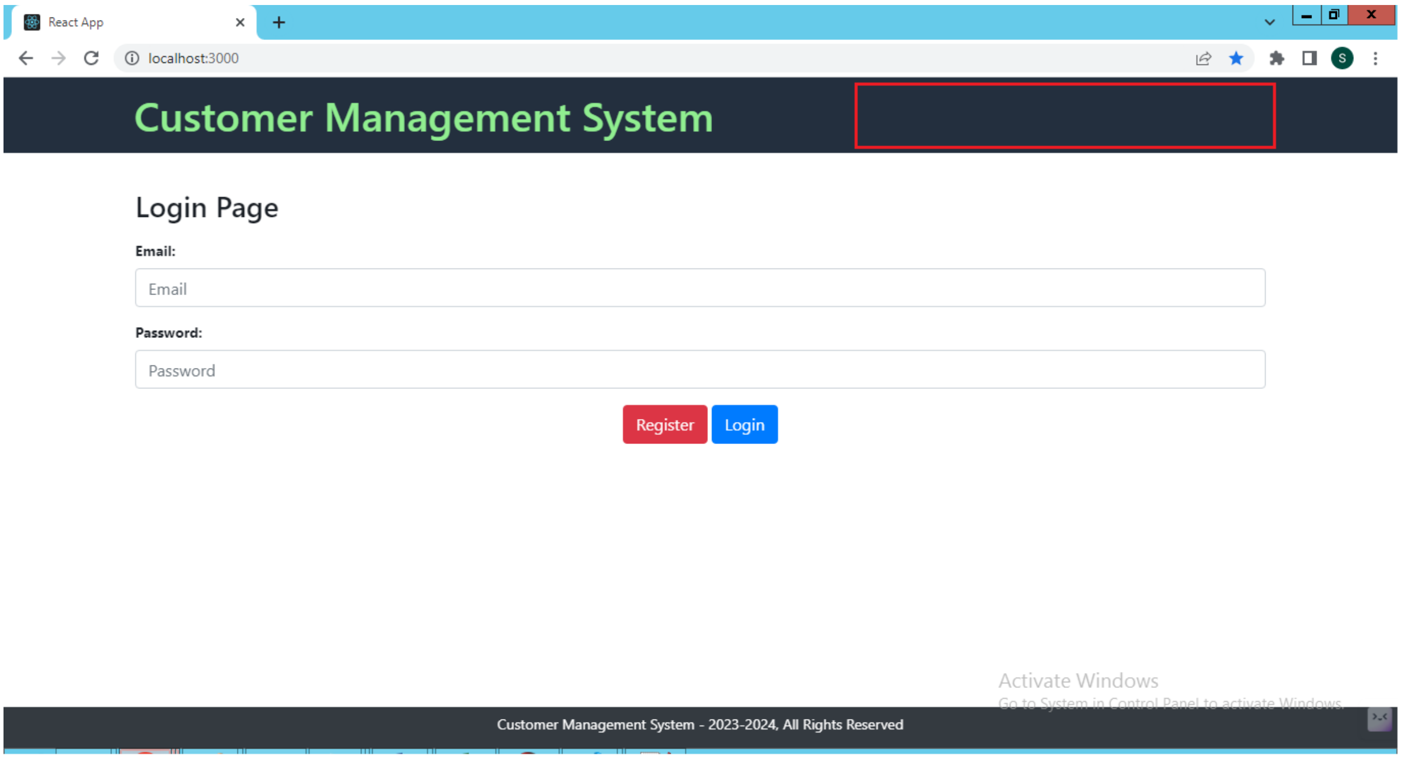

React App

localhost:3000

Customer Management System

Login Page

Email:

Email

Password:

Password

Register Login

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🔄 Sample API Interaction Flow

Register API:

```
POST /api/register
{
  "firstName": "Abdul",
  "lastName": "Rahman",
  "email": "abdul.rahman@gmail.com",
  "password": "Abdul@123",
  "phone": "9876543210",
  "address": "Sharjah"
}
```

Login API:

```
POST /api/login
{
  "email": "abdul.rahman@gmail.com",
  "password": "Abdul@123"
}

Response:
{
  "token": "eyJhbGciOiJIUzI1NiIsInR..."
}
```

Authenticated Request:

```
GET /api/customers
Headers: { Authorization: `Bearer ${token}` }
```

✓ Summary Table

Page	Validations	API Call	On Success
Register	Required fields, email, phone, password	`POST /register`	Show success, go to Login
Login	Required fields, invalid credentials	`POST /login`	Store JWT, go to Customer List
Customer List	Protected route via token	`GET /customers`	Render customer data in table
Edit Customer	Same validations as register	`PUT /customers/:id`	Update data in UI
Delete Customer	Click delete → confirm	`DELETE /customers/:id`	Remove from list
Logout	Clear token, redirect	N/A	Go to Login page

II. Backend: Dot Net Core, Web API, Entity Framework Core, SQL Server with Clear Architecture

✓ Steps to Setup and Run .NET Core Project (CMS)

▼ Step 1: Download or Clone the Project from GitHub

```
git clone <https://github.com/SheikGH/CMS_Backend.git>
```

Example: `git clone https://github.com/SheikGH/CMS_Backend.git`

💼 Step 2: Open the Solution in Visual Studio

1. Open **Visual Studio 2022+**
2. Click **"Open a project or solution"**
3. Navigate to the downloaded folder
4. Open `CMS.sln`

□ Step 3: Restore NuGet Packages

In **Visual Studio**:

- Right-click the **Solution** → **Restore NuGet Packages**
- Or use the terminal:

```
dotnet restore
```

⚙□ Step 4: Update `appsettings.json` (CMS.API/appsettings.json)

Example:

```
{
  "ConnectionStrings": {
    "DefaultConnection":
"Server=YOUR_SERVER_NAME;Database=CMS;Trusted_Connection=True;MultipleActiveResultSets=
true"
  },
  "Jwt": {
    "Key": "Your_Secret_Key_Here",
    "Issuer": "CMSApp",
    "Audience": "CMSAppUsers",
    "DurationInMinutes": 60
  },
  "Logging": {
    "LogLevel": {
      "Default": "Information",
      "Microsoft.AspNetCore": "Warning"
    }
  },
  "AllowedHosts": "*"
}
```

🔐 Replace `YOUR_SERVER_NAME` with your actual SQL Server name (e.g., `localhost\\SQLEXPRESS`)
Replace `"Your_Secret_Key_Here"` with a **strong secret key**

□ Step 5: Create Database

1. Open **SQL Server Management Studio (SSMS)**
2. Run:

```
CREATE DATABASE CMS;
```

📦 Step 6: Run Migrations and Update Database

In **Package Manager Console**:

1. Select **CMS.Infrastructure** as the default project
2. Run:

```
Add-Migration initialDb
Update-Database
```

Make sure `Startup Project` is set to `CMS.API`

📦 Step 7: Install Required NuGet Packages

◆ CMS.Core

Install:

```
Install-Package MediatR -Version 12.2.0
Install-Package Microsoft.AspNetCore.Authentication.JwtBearer -Version 6.0.27
Install-Package Microsoft.AspNetCore.Mvc.NewtonsoftJson -Version 6.0.31
Install-Package Microsoft.EntityFrameworkCore.Design -Version 7.0.16
Install-Package Newtonsoft.Json -Version 13.0.3
Install-Package Swashbuckle.AspNetCore -Version 6.5.0
```

◆ CMS.Infrastructure

```
Install-Package Microsoft.EntityFrameworkCore
Install-Package Microsoft.EntityFrameworkCore.Design
Install-Package Microsoft.EntityFrameworkCore.SqlServer
Install-Package Microsoft.EntityFrameworkCore.Tools
```

◆ CMS.Application

```
Install-Package AutoMapper.Extensions.Microsoft.DependencyInjection -Version 12.0.1
Install-Package MediatR -Version 12.2.0
Install-Package Microsoft.Extensions.Configuration.Abstractions -Version 7.0.0
Install-Package Microsoft.IdentityModel.Tokens -Version 6.35.0
Install-Package System.IdentityModel.Tokens.Jwt -Version 6.35.0
```

◆ CMS.API

```
Install-Package Microsoft.EntityFrameworkCore -Version 7.0.16
Install-Package Microsoft.EntityFrameworkCore.Design -Version 7.0.16
Install-Package Microsoft.EntityFrameworkCore.SqlServer -Version 7.0.16
Install-Package Microsoft.EntityFrameworkCore.Tools -Version 7.0.16
```

▶☐ Step 8: Run the Application

1. Set **CMS.API** as the **Startup Project**
2. Press `F5` or click **Run**
3. Swagger UI should open:

   ```
   https://localhost:7067/swagger/index.html
   ```

🔁 Step 9: Test Endpoints via Swagger or Postman

- ✅ **POST** `/api/Auth/login`
- ✅ **GET** `/api/Customers`
- ✅ **POST** `/api/Customers`
- ✅ **PUT** `/api/Customers/{id}`
- ✅ **DELETE** `/api/Customers/{id}`

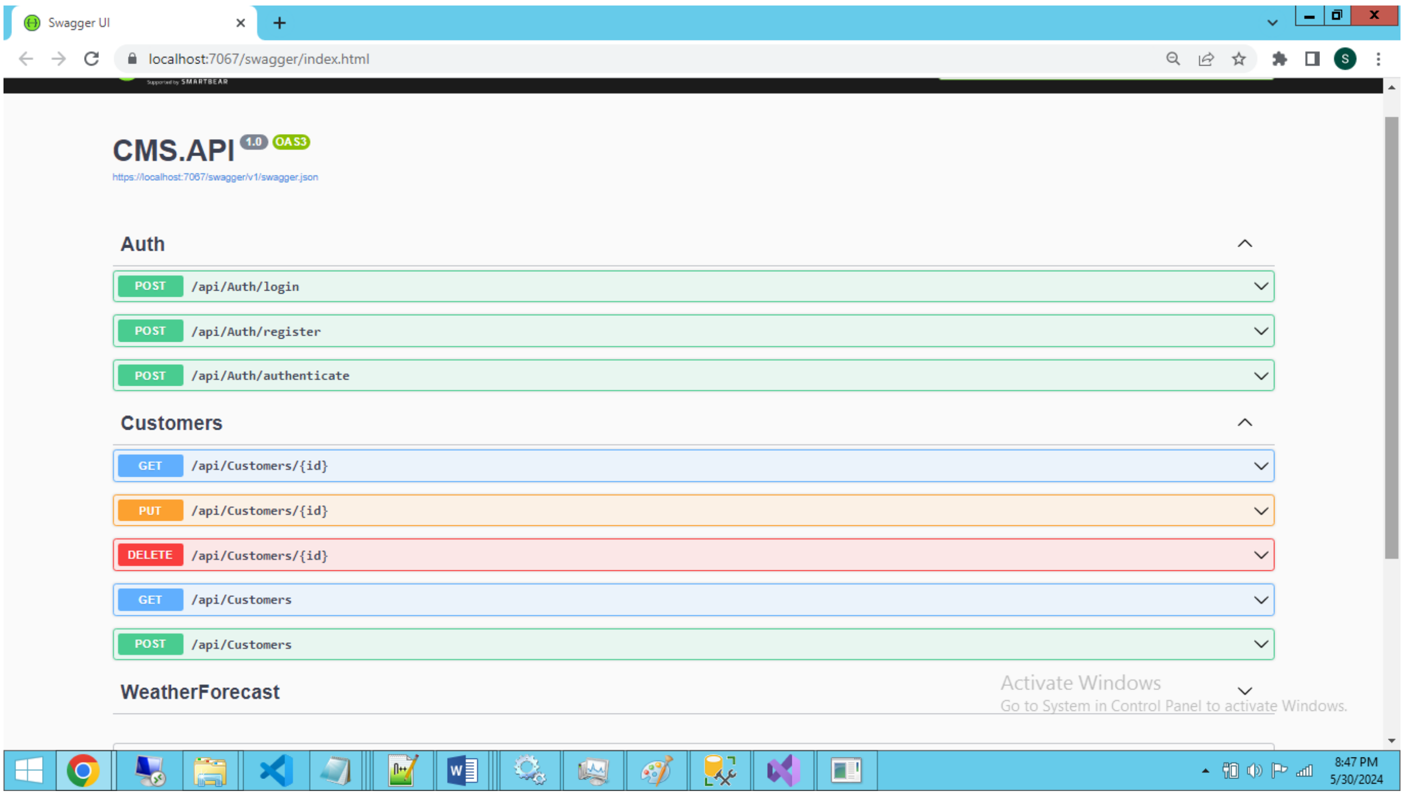
✅ Project Structure Recap (Clean Architecture)

```
CMS/
├── CMS.Core/           → Domain Models, Interfaces
├── CMS.Infrastructure/ → EF Core, SQL, Repositories
├── CMS.Application/    → Services, DTOs, Mapping, Use Cases
├── CMS.API/            → Controllers, Middleware, Auth, Swagger
```

II. Backend: Dot Net Core, Web API, Entity Framework Core, SQL Server with Clear Architecture

✅ Backend API Summary

.NET Core Site URL: `https://localhost:7067/swagger/index.html`
Tech Stack: ASP.NET Core Web API + EF Core + SQL Server + JWT + Clean Architecture

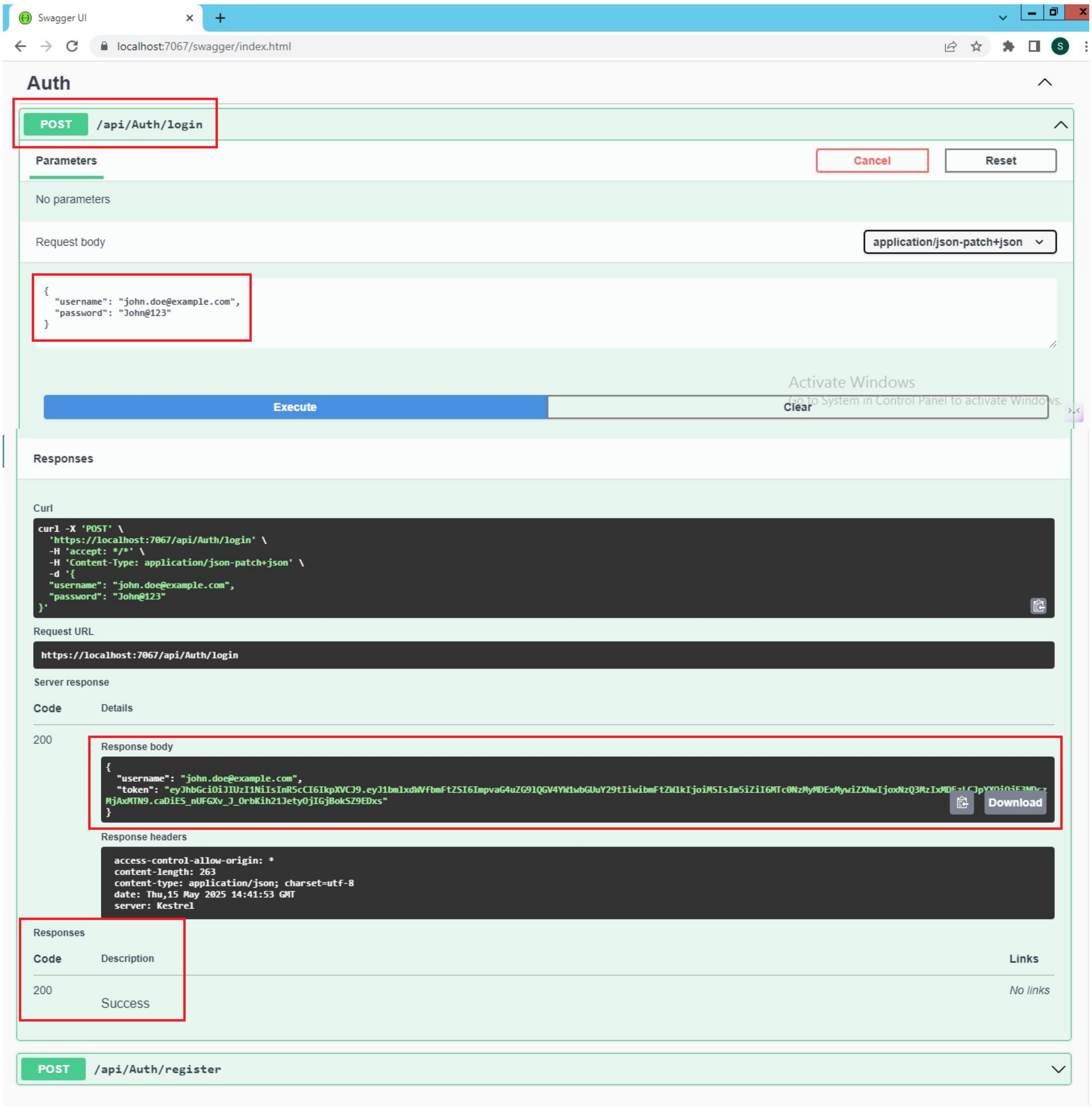


🔐 1. Authentication Endpoint

- **Purpose**: Login and generate JWT token
- **URL**: `GET https://localhost:7067/api/Auth/login`
- **Payload**:

```
{
    "username": "john@gmail.com",
    "password": "john"
}
```

- **Response**: JWT Token
- **Frontend Logic**:
  - Store token in `localStorage`
  - Send token in `Authorization` header for all protected requests



```
{
  "username": "john.doe@example.com",
  "password": "John@123"
}
```

Curl

```
curl -X 'POST' \
  'https://localhost:7067/api/Auth/login' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json-patch+json' \
  -d '{
  "username": "john.doe@example.com",
  "password": "John@123"
}'
```

Request URL

```
https://localhost:7067/api/Auth/login
```

Server response

Code	Details
200	Response body

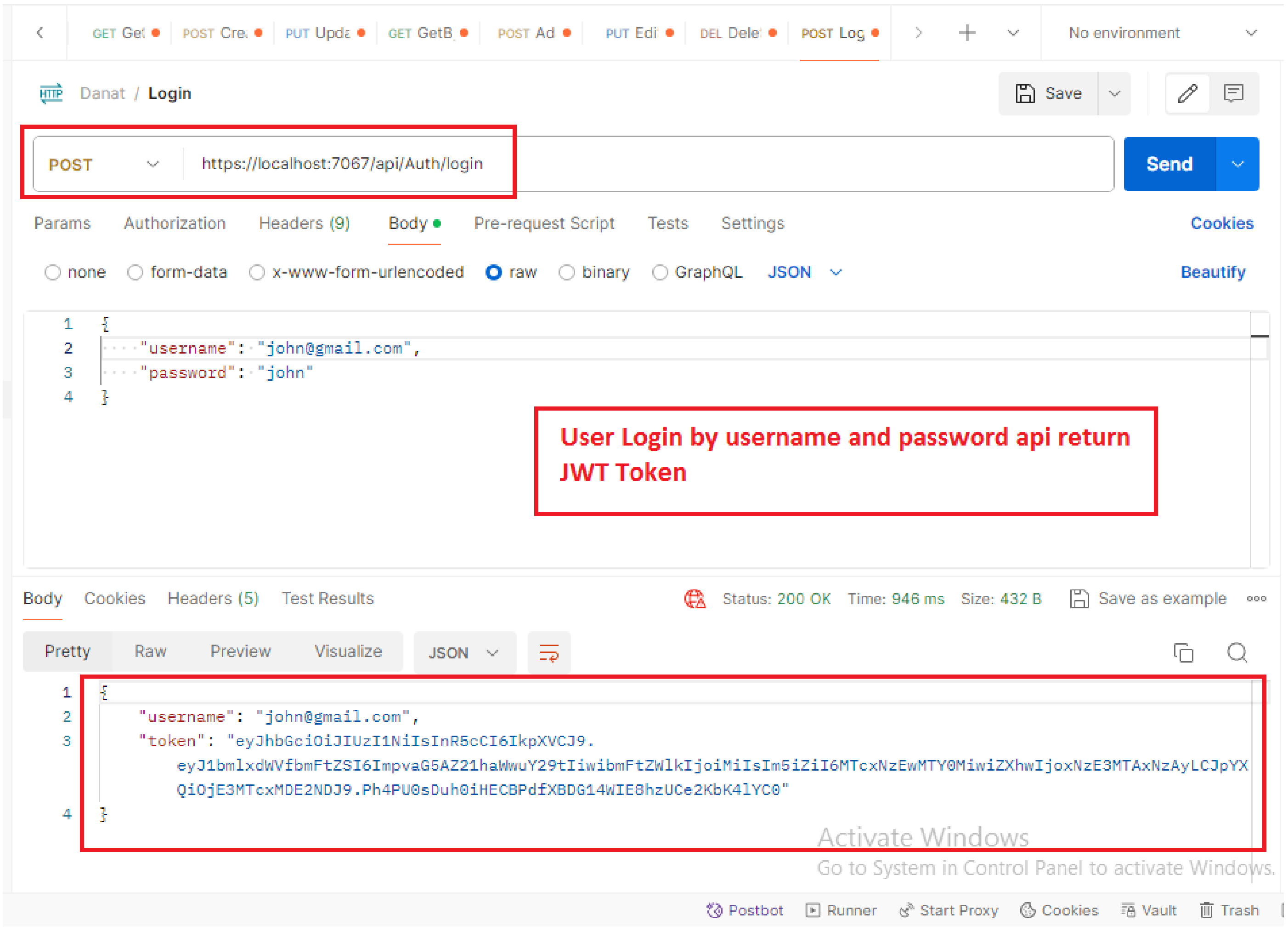
```
{
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bmlxdWVfbmFtZSI6ImpvaG4uZG91QGV4YW1wbGUuY29tIiwibmFtZWlkIjoiMSIsIm5iZiI6MTc0NzMyMDExMywiZXhwIjoxNzQ3MzIxMDEzLCJpYXQiOjE3NDcz
MjAxMTN9.caDiES_nUFGXv_J_OrbKih21JetyOjIGjBokSZ9EDxs"
}
```

Response headers

```
access-control-allow-origin: *
content-length: 263
content-type: application/json; charset=utf-8
date: Thu,15 May 2025 14:41:53 GMT
server: Kestrel
```

Responses

Code	Description	Links
200	Success	No links



POST https://localhost:7067/api/Auth/login

```
{
    "username": "john@gmail.com",
    "password": "john"
}
```

User Login by username and password api return JWT Token

Status: 200 OK Time: 946 ms Size: 432 B

```
{
    "username": "john@gmail.com",
    "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.
        eyJ1bmlxdWVfbmFtZSI6ImpvaG5AZ21haWwuY29tIiwibmFtZWlkIjoiMiIsIm5iZiI6MTcxNzEwMTY0MiwiZXhwIjoxNzE3MTAxNzAyLCJpYX
        QiOjE3MTcxMDE2NDJ9.Ph4PU0sDuh0iHECBPdfXBDG14WIE8hzUCe2KbK4lYC0"
}
```

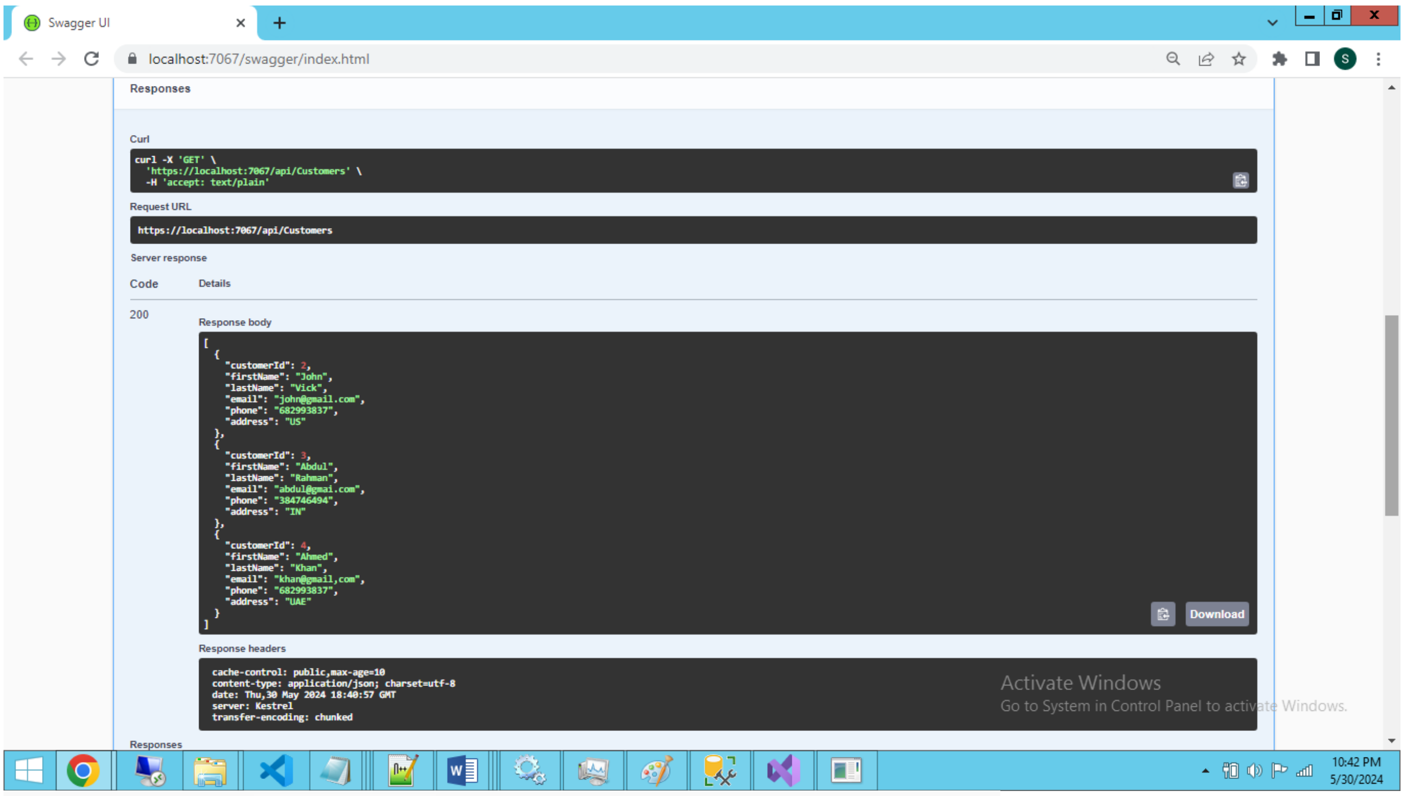
2. Get All Customers

- **Purpose**: Retrieve list of all customers
- **URL**: `GET https://localhost:7067/api/Customers`
- **Headers**:

```
Authorization: Bearer <token>
```

- **Response**:

```
[
  {
    "customerId": 1,
    "firstName": "John",
    "lastName": "Doe",
    "email": "john.doe@gmail.com",
    "phone": "1234567890",
    "address": "USA"
  },
  ...
]
```


localhost:7067/swagger/index.html

Responses

Curl

```
curl -X 'GET' \
  'https://localhost:7067/api/Customers' \
  -H 'accept: text/plain'
```

Request URL

```
https://localhost:7067/api/Customers
```

Server response

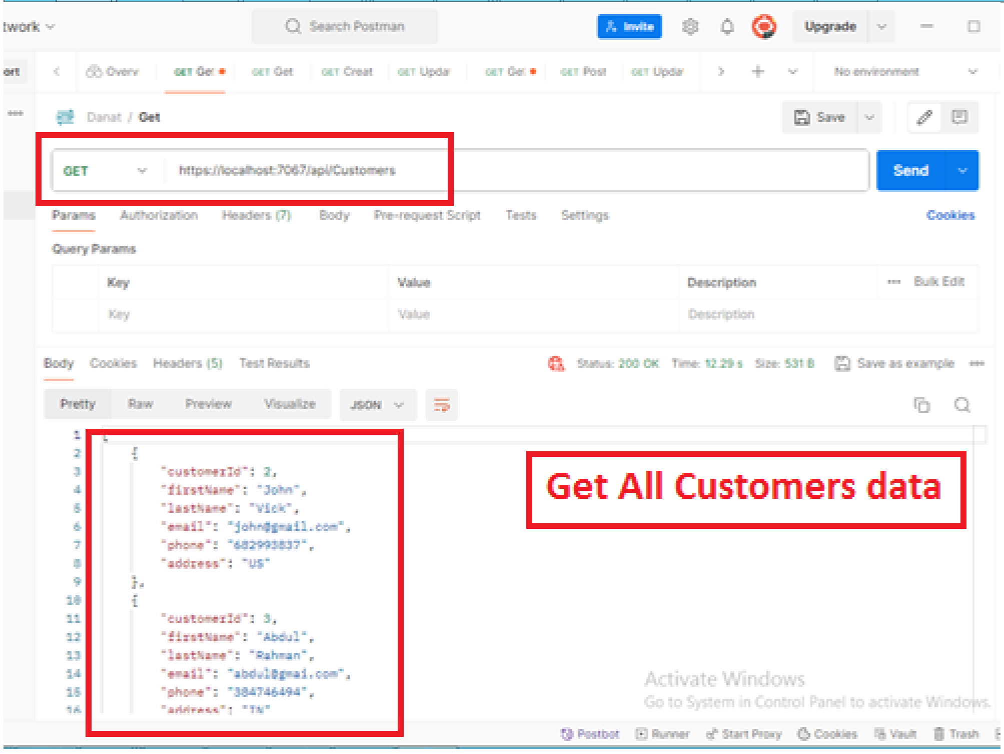
Code: 200

Response body

```
[
  {
    "customerId": 2,
    "firstName": "John",
    "lastName": "Vick",
    "email": "john@gmail.com",
    "phone": "682993837",
    "address": "US"
  },
  {
    "customerId": 3,
    "firstName": "Abdul",
    "lastName": "Rahman",
    "email": "abdul@gmai.com",
    "phone": "384746494",
    "address": "IN"
  },
  {
    "customerId": 4,
    "firstName": "Ahmed",
    "lastName": "Khan",
    "email": "khan@gmail,com",
    "phone": "682993837",
    "address": "UAE"
  }
]
```

Response headers

```
cache-control: public,max-age=10
content-type: application/json; charset=utf-8
date: Thu,30 May 2024 18:40:57 GMT
server: Kestrel
transfer-encoding: chunked
```


Danat / Get

GET https://localhost:7067/api/Customers

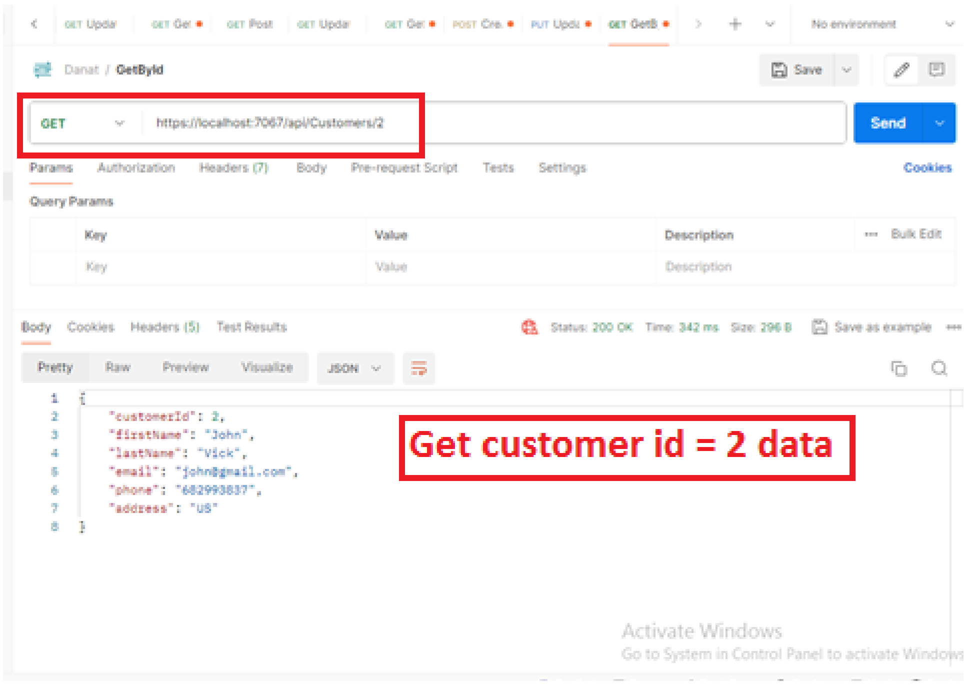
Status: 200 OK Time: 12.29 s Size: 531 B

```
[
    {
        "customerId": 2,
        "firstName": "John",
        "lastName": "Vick",
        "email": "john@gmail.com",
        "phone": "682993837",
        "address": "US"
    },
    {
        "customerId": 3,
        "firstName": "Abdul",
        "lastName": "Rahman",
        "email": "abdul@gmai.com",
        "phone": "384746494",
        "address": "IN"
```

Get All Customers data

🔍 3. Get Customer by ID

- **Purpose**: Retrieve a specific customer
- **URL**: `GET https://localhost:7067/api/Customers/{id}`
- **Example**: `GET /api/Customers/2`
- **Headers**: Requires JWT token



GET https://localhost:7067/api/Customers/2

```
{
    "customerId": 2,
    "firstName": "John",
    "lastName": "Vick",
    "email": "john@gmail.com",
    "phone": "682993837",
    "address": "US"
}
```

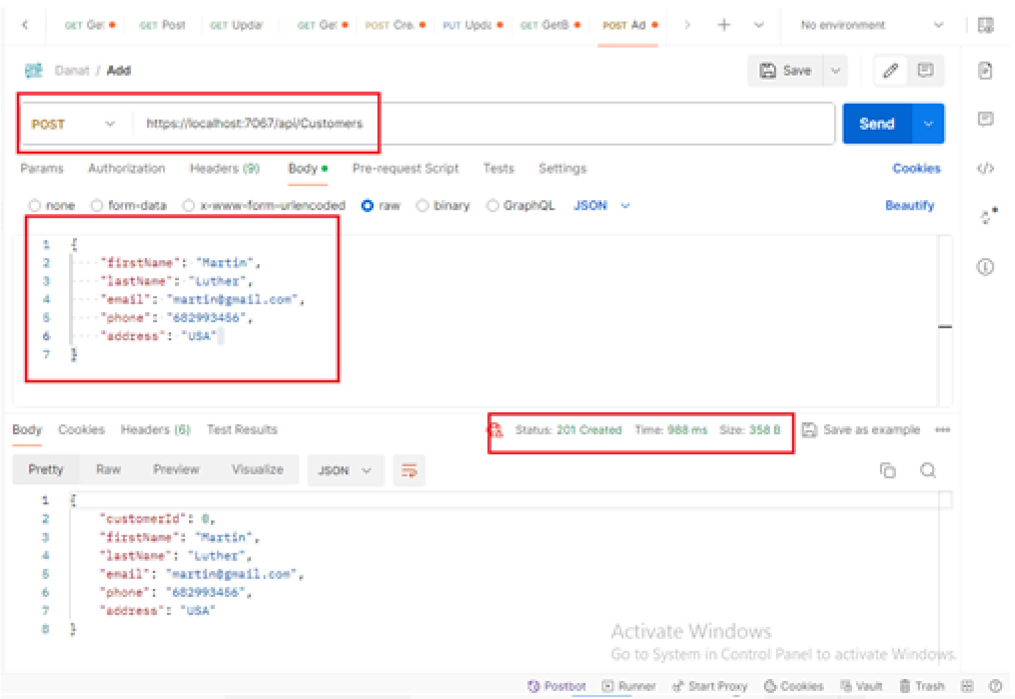
Get customer id = 2 data

✚ 4. Add New Customer

- **Purpose**: Add a new customer
- **URL**: `POST https://localhost:7067/api/Customers`
- **Payload**:

```
{
    "firstName": "Martin",
    "lastName": "Luther",
    "email": "martin@gmail.com",
    "phone": "682993456",
    "address": "USA"
}
```

- **Validation**:
  - Required: `firstName`, `lastName`, `email`, `phone`, `address`
  - Unique: `email`

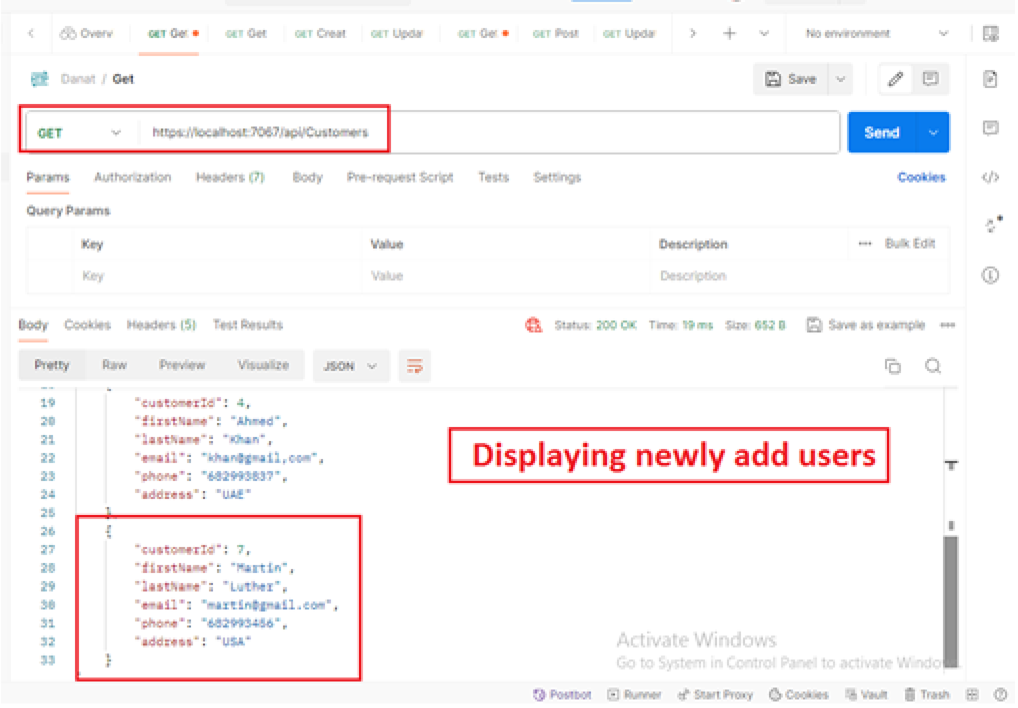

Danat / Add

POST https://localhost:7067/api/Customers

```
{
    "firstName": "Martin",
    "lastName": "Luther",
    "email": "martin@gmail.com",
    "phone": "682993456",
    "address": "USA"
}
```

Status: 201 Created Time: 988 ms Size: 358 B

```
{
    "customerId": 0,
    "firstName": "Martin",
    "lastName": "Luther",
    "email": "martin@gmail.com",
    "phone": "682993456",
    "address": "USA"
}
```


Danat / Get

GET https://localhost:7067/api/Customers

Status: 200 OK Time: 19 ms Size: 652 B

```
        "customerId": 4,
        "firstName": "Ahmed",
        "lastName": "Khan",
        "email": "khan@gmail.com",
        "phone": "682993837",
        "address": "UAE"
    },
    {
        "customerId": 7,
        "firstName": "Martin",
        "lastName": "Luther",
        "email": "martin@gmail.com",
        "phone": "682993456",
        "address": "USA"
    }
```

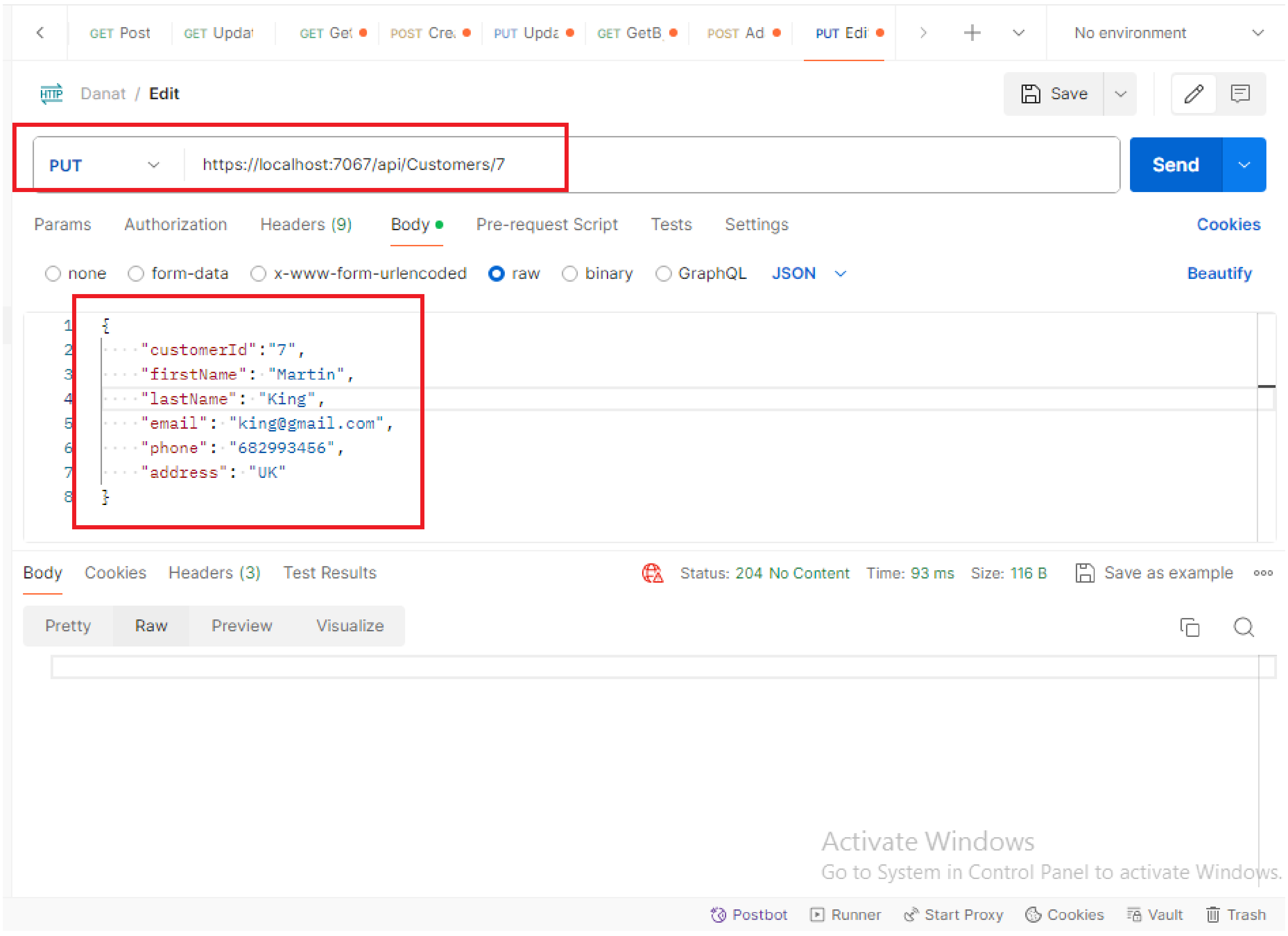
Displaying newly add users

✏️ 5. Edit Existing Customer

- **Purpose**: Update customer details
- **URL**: `PUT https://localhost:7067/api/Customers/{id}`
- **Example**: `PUT /api/Customers/7`
- **Payload**:

```
{
    "customerId":"7",
    "firstName": "Martin",
    "lastName": "King",
    "email": "king@gmail.com",
    "phone": "682993456",
    "address": "UK"
}
```

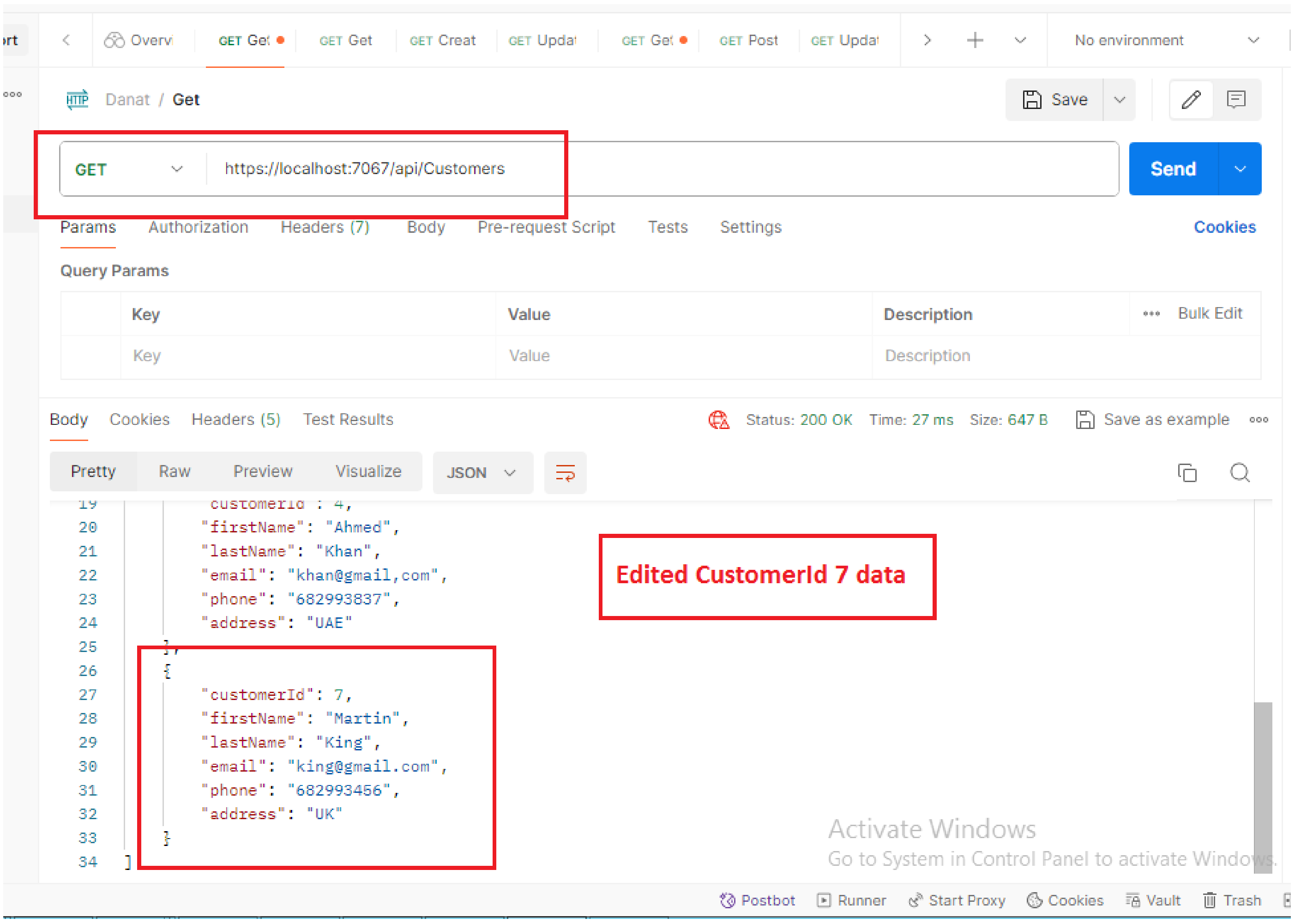
- **Note**:
  - Validates ID exists
  - Ensures email uniqueness



PUT https://localhost:7067/api/Customers/7

```
{
    "customerId":"7",
    "firstName": "Martin",
    "lastName": "King",
    "email": "king@gmail.com",
    "phone": "682993456",
    "address": "UK"
}
```

Status: 204 No Content   Time: 93 ms   Size: 116 B



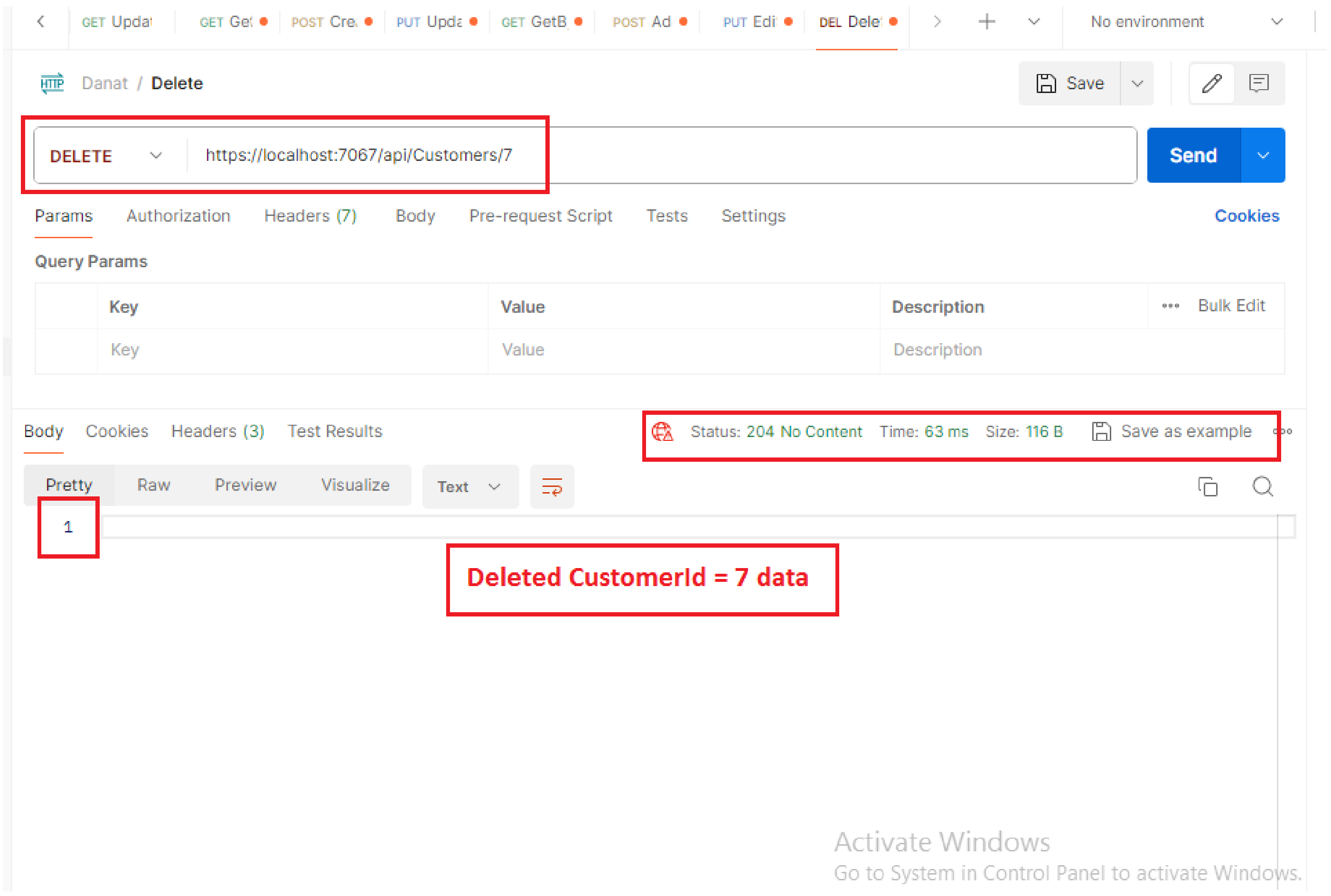
GET https://localhost:7067/api/Customers

Status: 200 OK Time: 27 ms Size: 647 B

```
        "customerId": 4,
        "firstName": "Ahmed",
        "lastName": "Khan",
        "email": "khan@gmail,com",
        "phone": "682993837",
        "address": "UAE"
    },
    {
        "customerId": 7,
        "firstName": "Martin",
        "lastName": "King",
        "email": "king@gmail.com",
        "phone": "682993456",
        "address": "UK"
    }
]
```

✕ 6. Delete Customer

- **Purpose**: Remove a customer by ID
- **URL**: `DELETE https://localhost:7067/api/Customers/{id}`
- **Example**: `DELETE /api/Customers/7`



DELETE https://localhost:7067/api/Customers/7

Status: 204 No Content Time: 63 ms Size: 116 B

1

Deleted CustomerId = 7 data

✓ Clean Architecture Layers (Recommended)

Your architecture should be structured like:

```
/Core
  - Entities (Customer.cs)
  - Interfaces (ICustomerRepository.cs)
  - DTOs (CustomerDto.cs)
  - Validation (FluentValidation / DataAnnotations)

 /Application
  - Services (CustomerService.cs)
  - UseCases (e.g., GetAllCustomersQuery.cs)

 /Infrastructure
  - Data (AppDbContext.cs)
  - Repositories (CustomerRepository.cs)

 /API
  - Controllers (CustomerController.cs, AuthController.cs)
  - Middleware (JWT, ExceptionHandling)
  - Startup Configuration
```

🔐 Security

- Use `[Authorize]` attribute on controller or action level
- Validate JWT token in each request
- Return `401 Unauthorized` if the token is missing or invalid

🔗 Frontend ↔ Backend Connection

Frontend Route	Backend API Endpoint
`/register`	`POST /api/Customers`
`/login`	`GET /api/Auth/login`
`/customer-list`	`GET /api/Customers`
Inline Edit Customer	`PUT /api/Customers/{id}`
Delete Button Click	`DELETE /api/Customers/{id}`