Documentation

Project Title: Book Shopping Cart MVC

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Introduction

In the digital era, online shopping platforms have revolutionized how people buy and sell products. The **Book Shopping Cart MVC** project is developed to provide users with a platform to purchase books from the comfort of their homes.

The project is built on the **ASP.NET MVC framework**, which separates the application logic into three interconnected components—Model, View, and Controller—making it easier to manage and scale.

The system integrates **SQL Server** for database management, allowing seamless storage and retrieval of book, user, and order data. The project also incorporates **user authentication** and **authorization** to secure sensitive information.

Abstract

The **Book Shopping Cart MVC** project is a web-based e-commerce system designed to simplify the online purchase of books. It enables users to browse available books, add them to a shopping cart, and proceed with checkout. The system uses **ASP.NET MVC framework** with **SQL Server** for backend operations.

The project demonstrates the implementation of **Model-View-Controller architecture**, **user authentication**, and **database connectivity** using Entity Framework. It offers separate modules for users and administrators, ensuring smooth management of book inventory, user accounts, and orders.

This documentation provides detailed insight into the project's objectives, architecture, database design, implementation, and testing.

Objective

- To design and develop a web-based platform for online book shopping.
- To implement secure login and registration for users.
- To manage books, orders, and users using a database-driven system.
- To apply **MVC architecture** for scalability and maintainability.
- To perform **CRUD (Create, Read, Update, Delete)** operations efficiently.

System Requirements

Hardware Requirements

- Processor: Intel Core i3 or above
- RAM: 4 GB minimum
- Hard Disk: 10 GB free space
- Display: 1024x768 resolution

Software Requirements

- Operating System: Windows 10 or later
- IDE: Visual Studio 2022
- Framework: ASP.NET MVC 5
- Database: Microsoft SQL Server
- Browser: Microsoft Edge / Google Chrome

Technologies Used

Component	Technology
Frontend	HTML, CSS, Bootstrap
Backend	ASP.NET MVC (C#)
Database	SQL Server
IDE	Visual Studio
Version Control	Git / GitHub

Database Design

TableName	Description
Books	Contains book details like title, author, price
Orders	Stores order information of users
OrderDetails	Contains book details related to each order
ShoppingCart	Manages temporary cart data
Genre	Contains different categories or genres of books (e.g., Fiction, Education, Technology).
CartDetail	Stores individual book items that are currently in a user's shopping cart (temporary storage before order placement).
Stock	Maintains current stock levels for each book to track availability.
AspNetUsers	Stores user details such as username, email, and password hash.

Screenshot

Register page

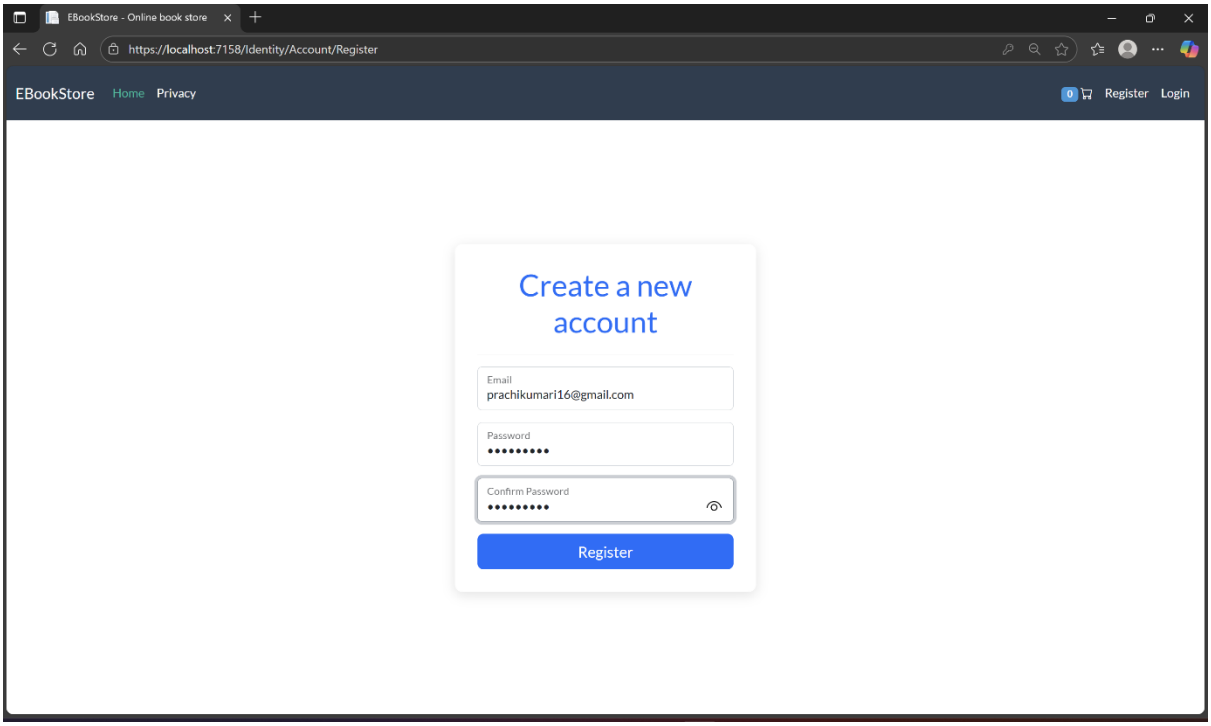


Figure - 1

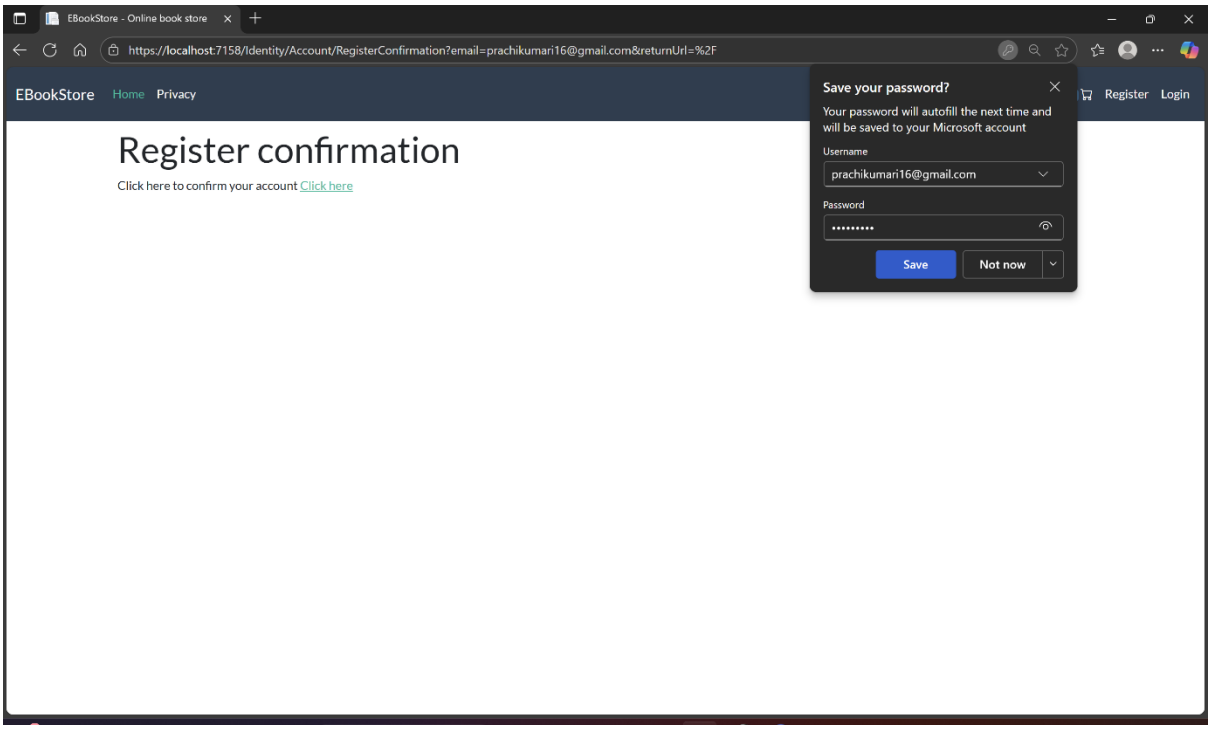


Figure - 2

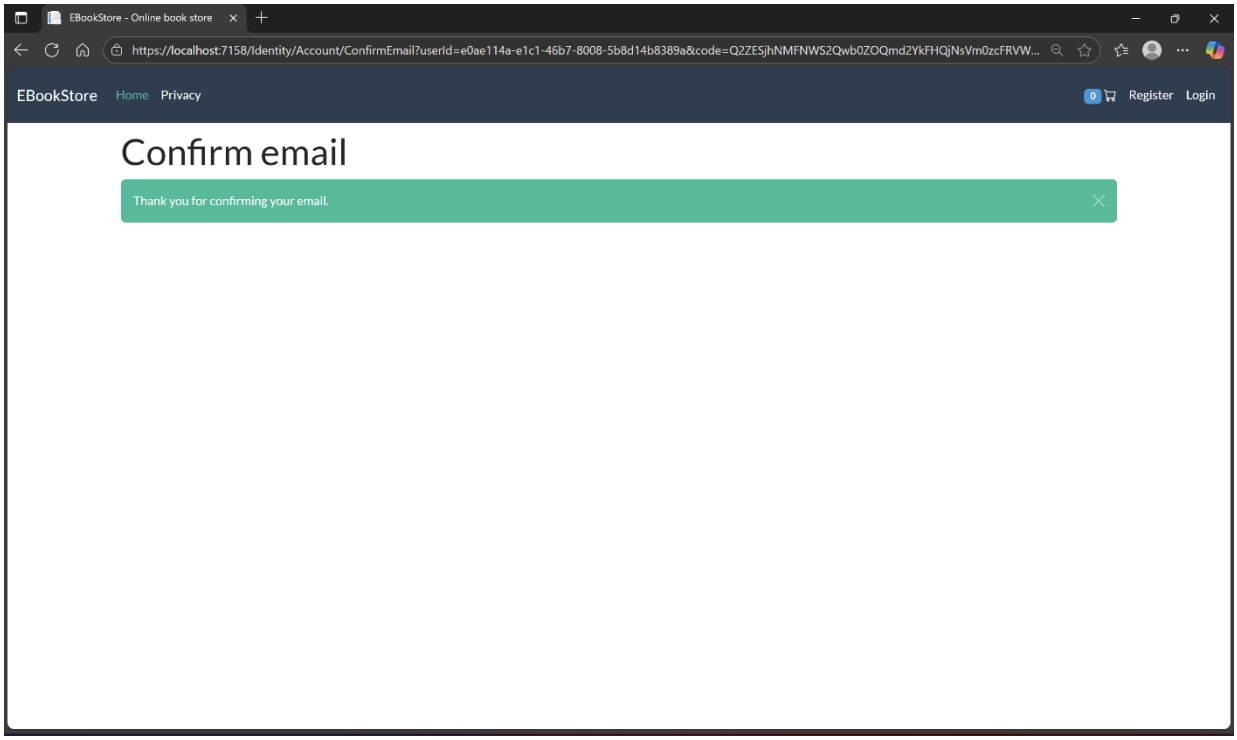


Figure - 3

Login Page

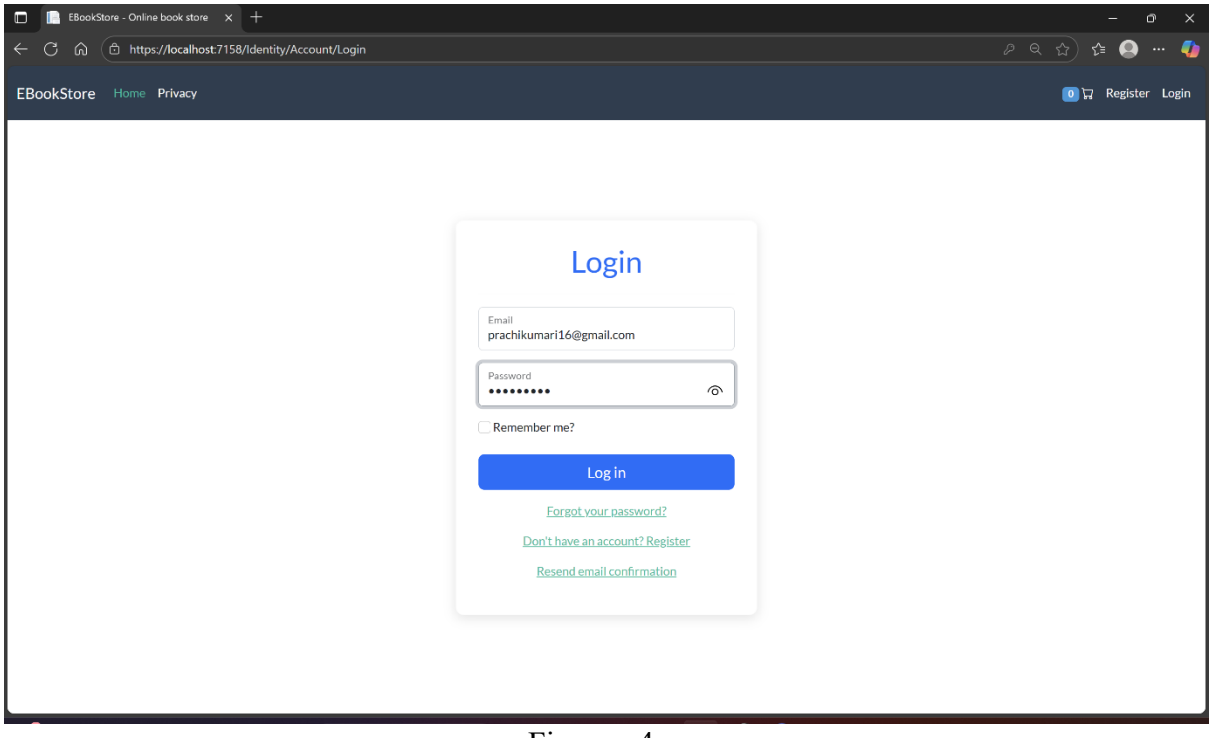


Figure - 4

Home Page

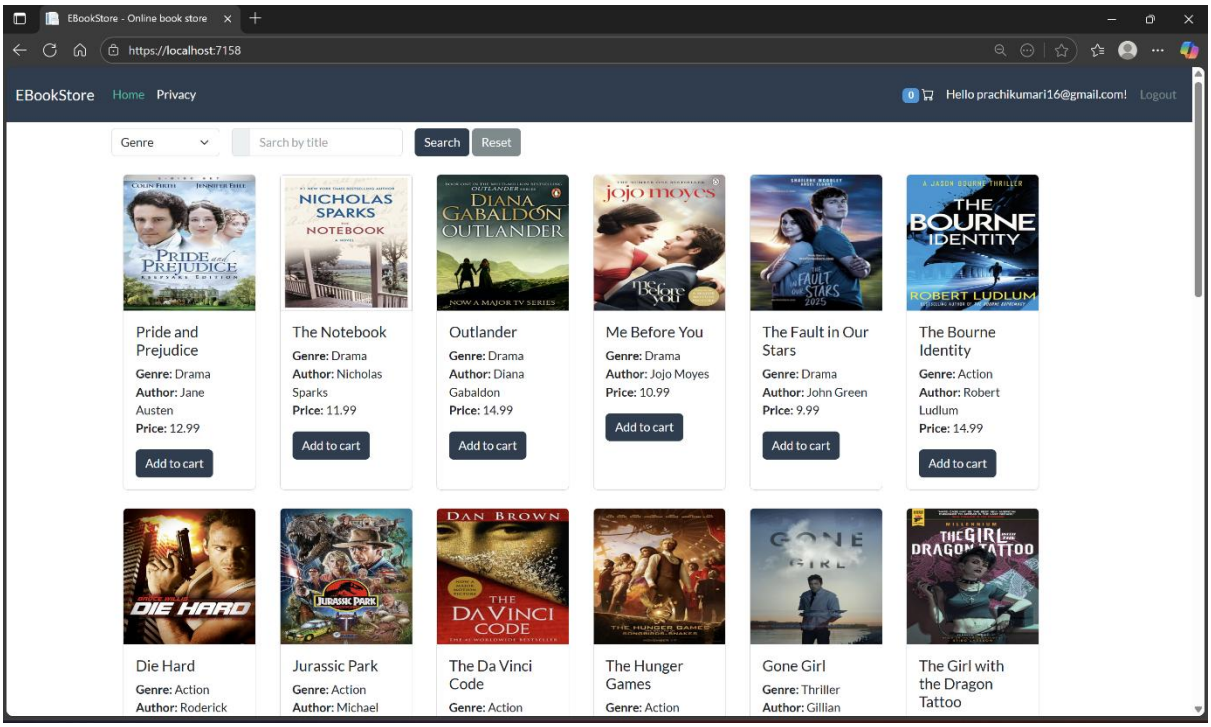


Figure - 5

Cart (Before adding the item)

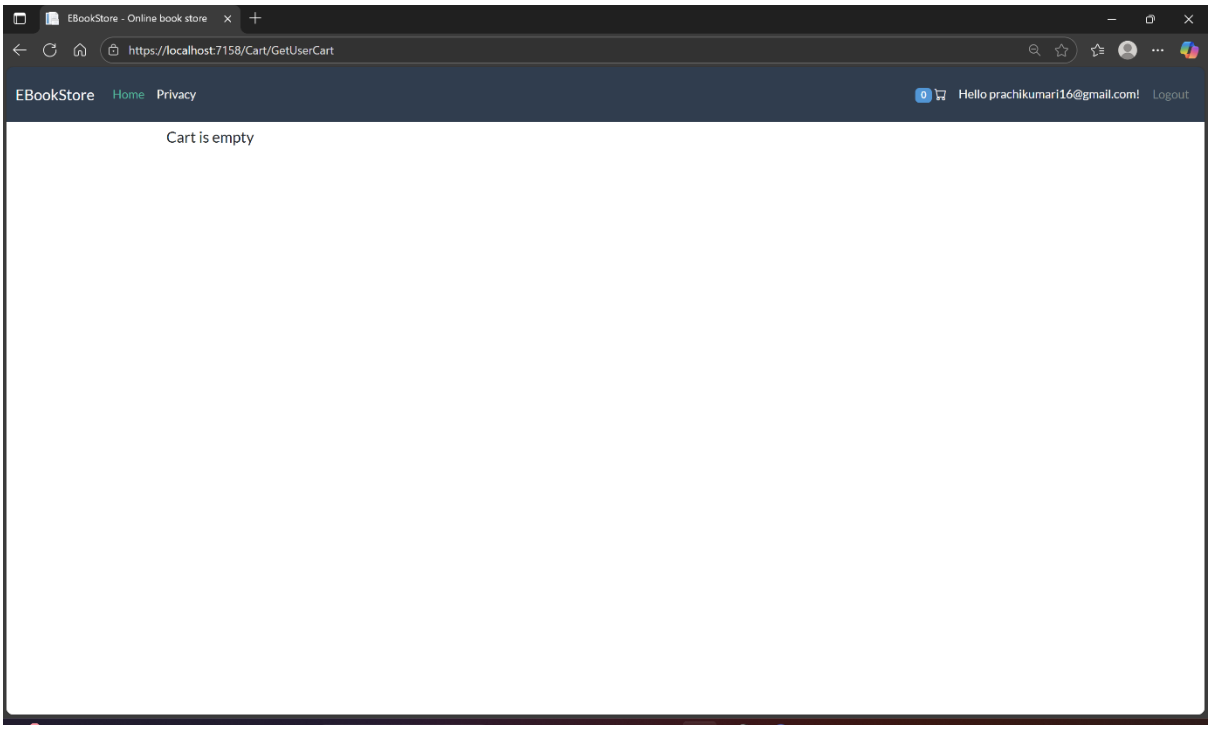
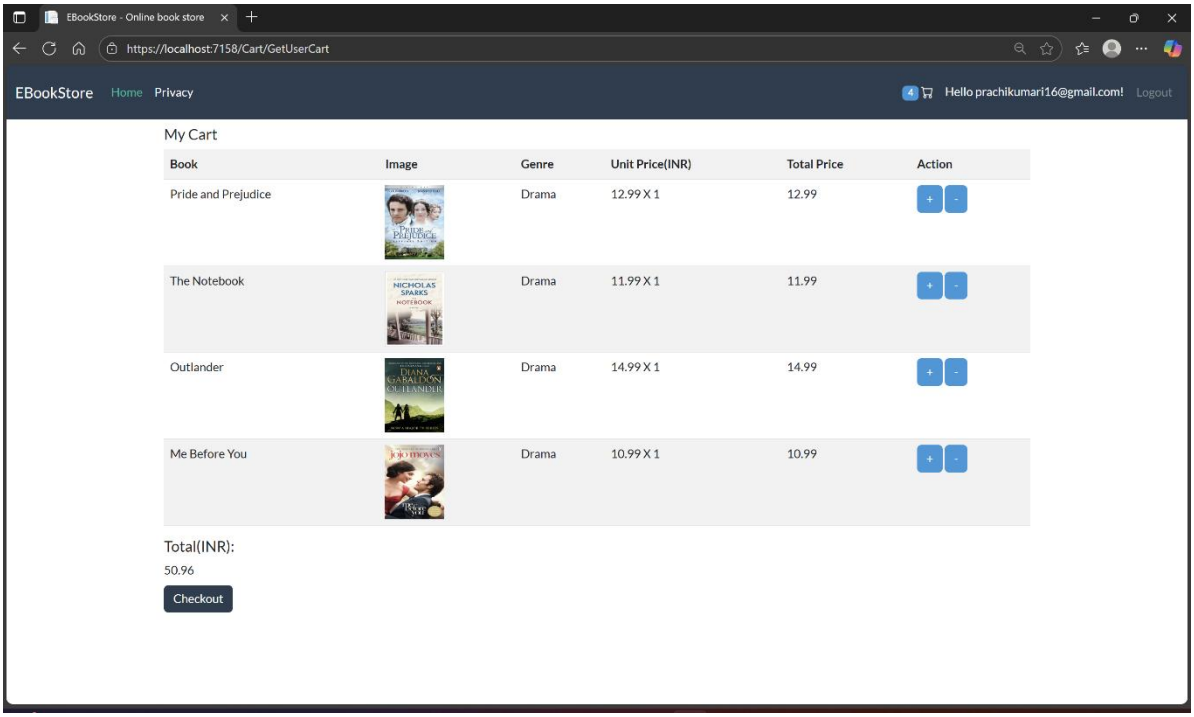


Figure - 6

Cart (After adding the item)



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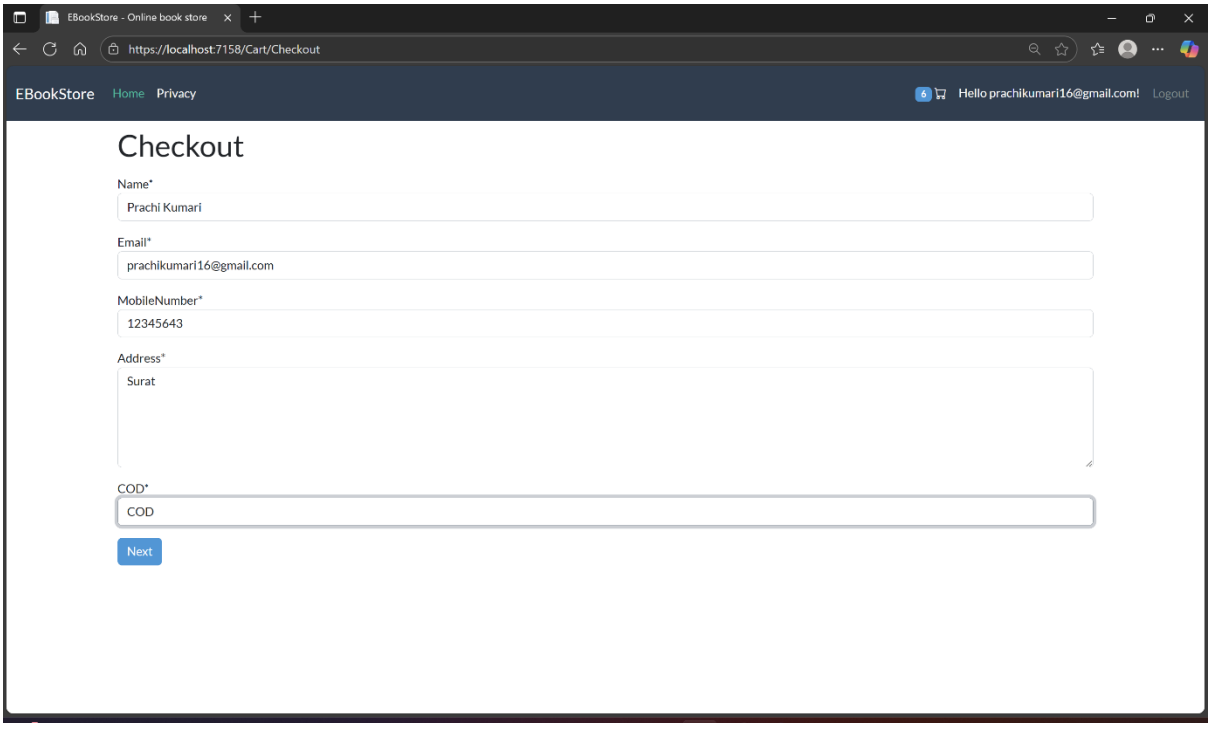

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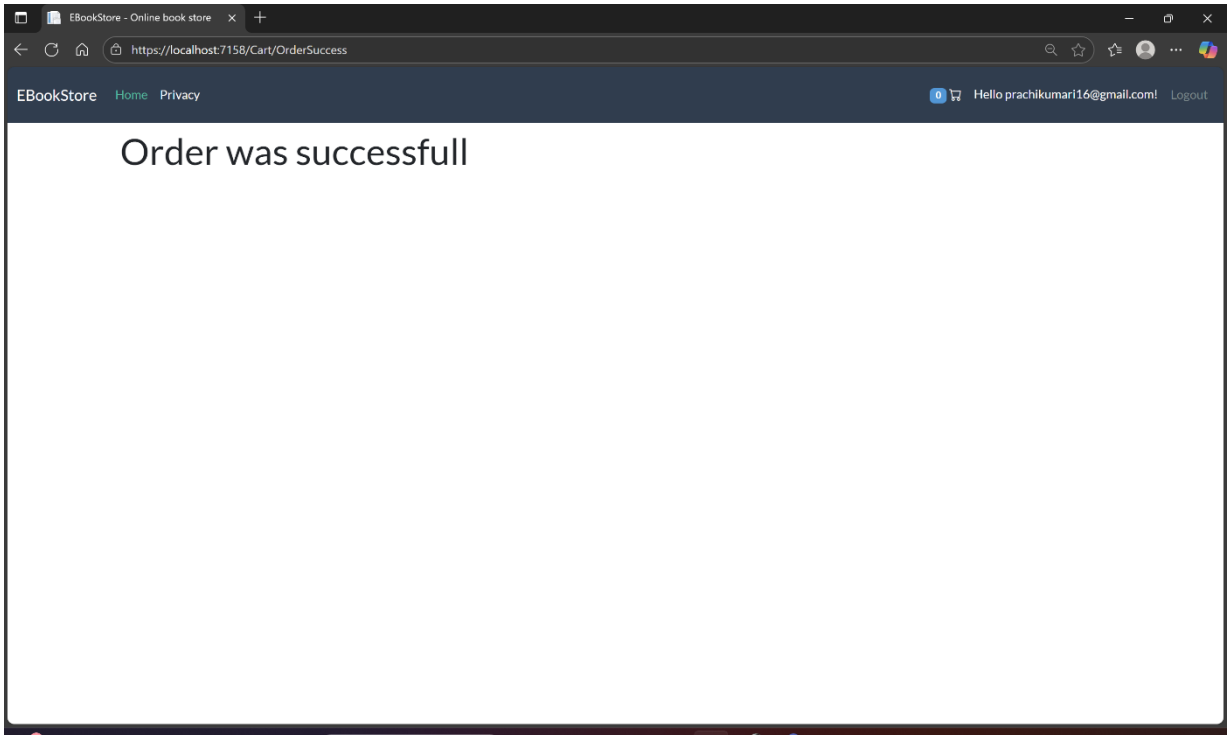
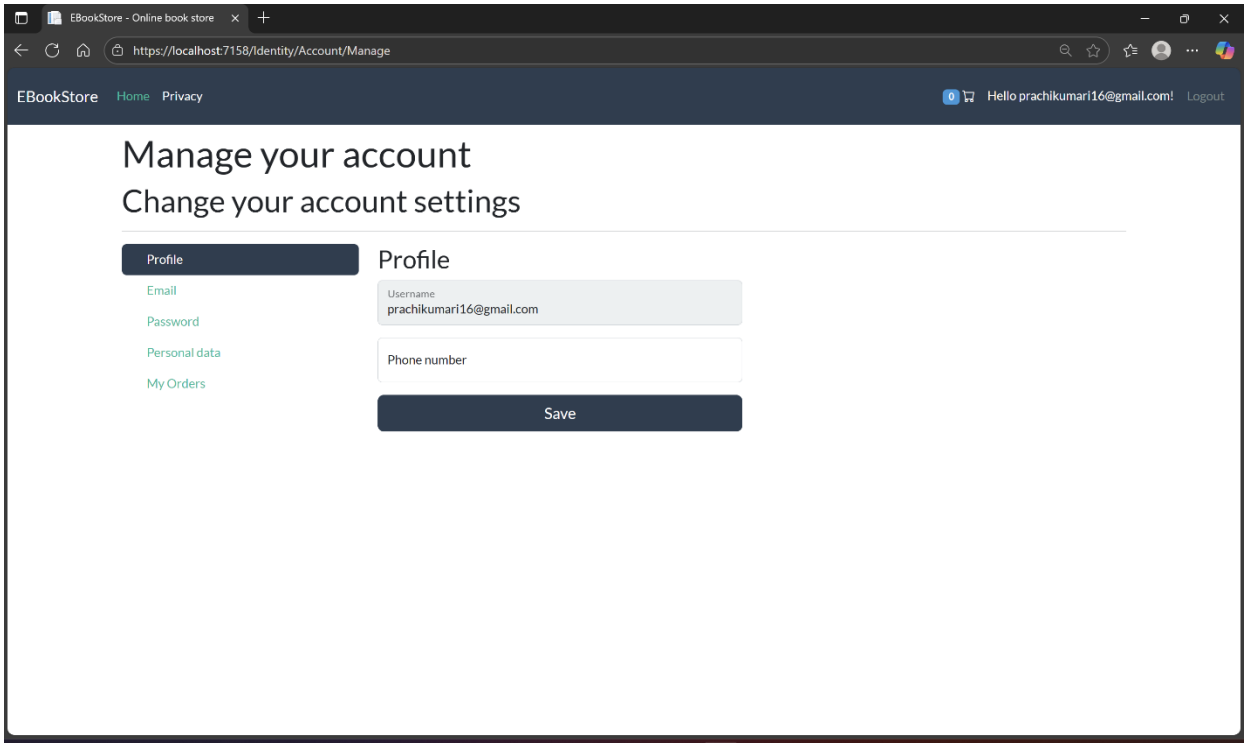


Figure - 9

User's Profile



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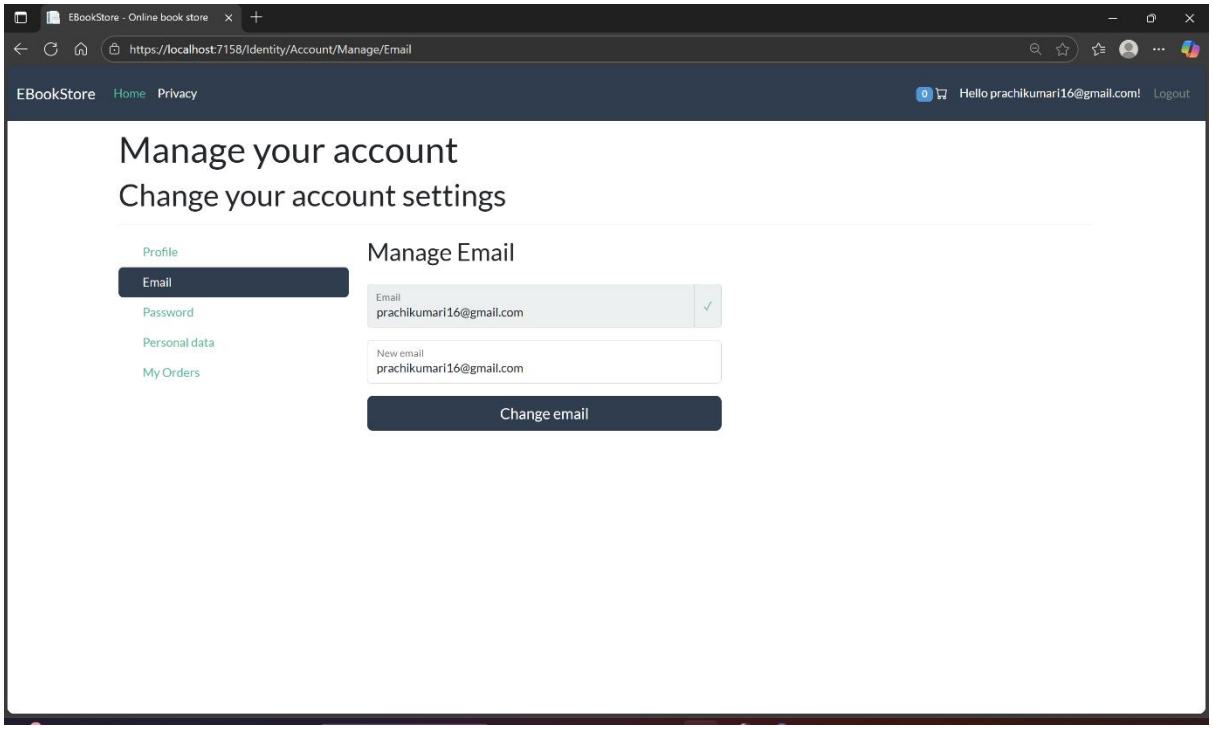

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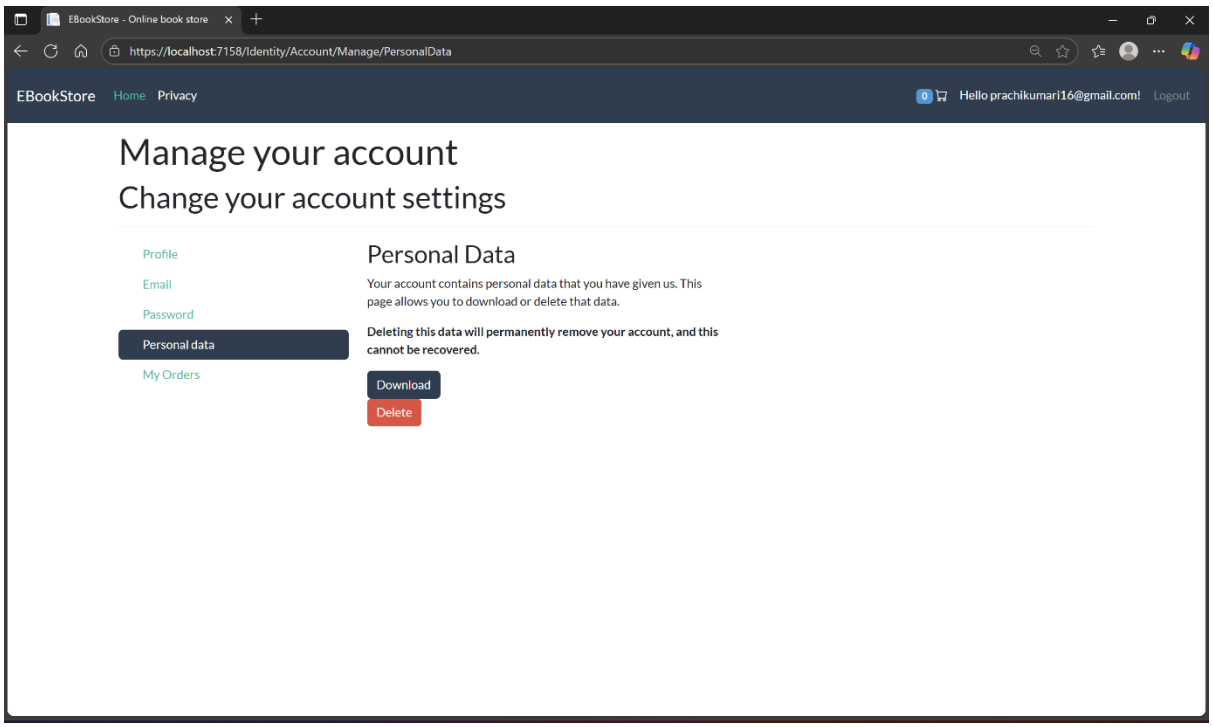

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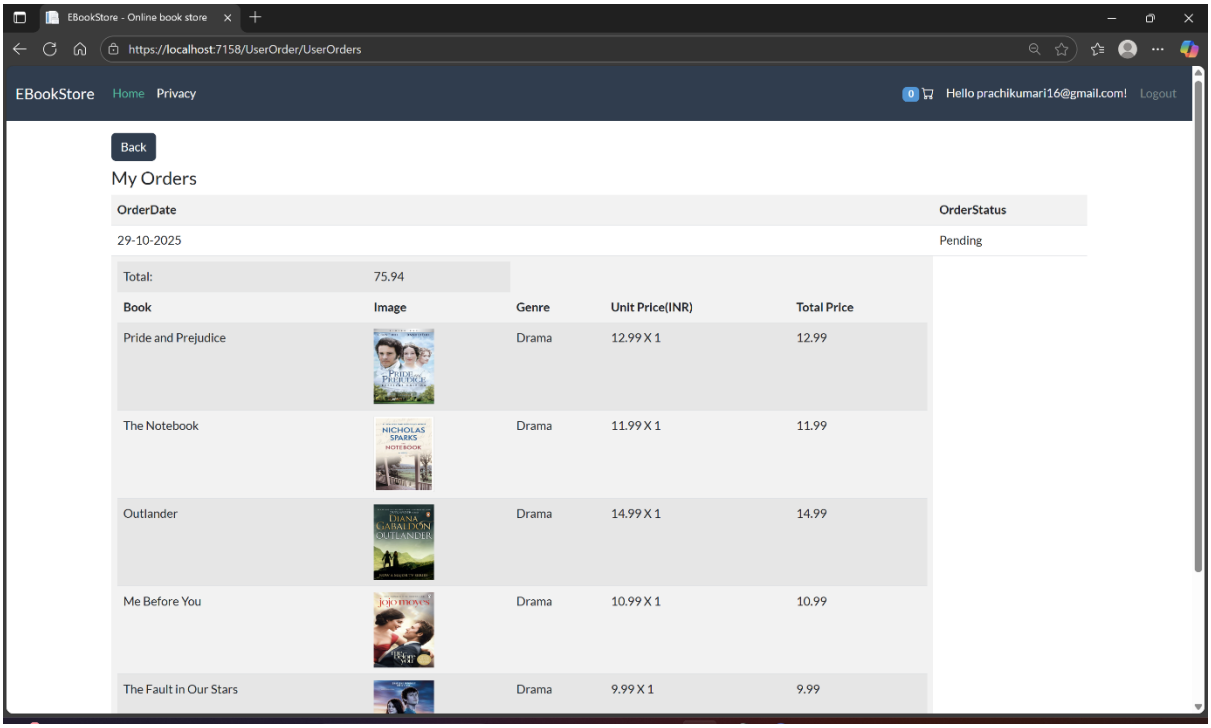

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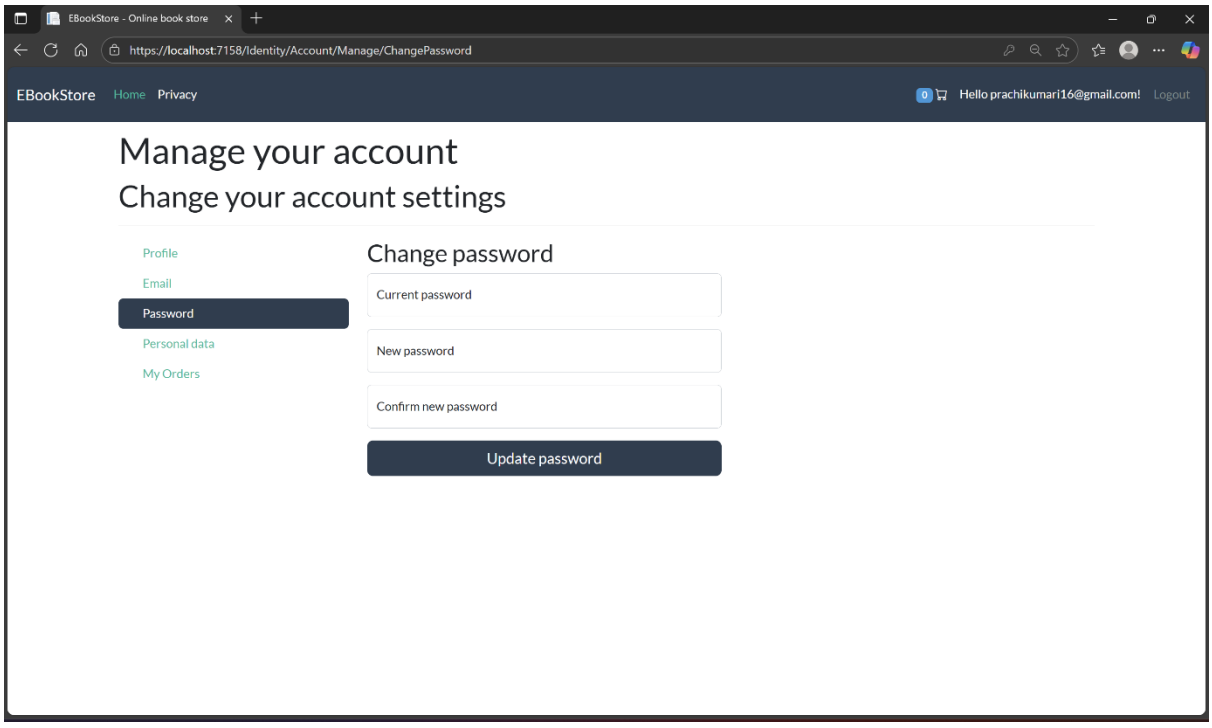

Figure - 14

Login Data Saved

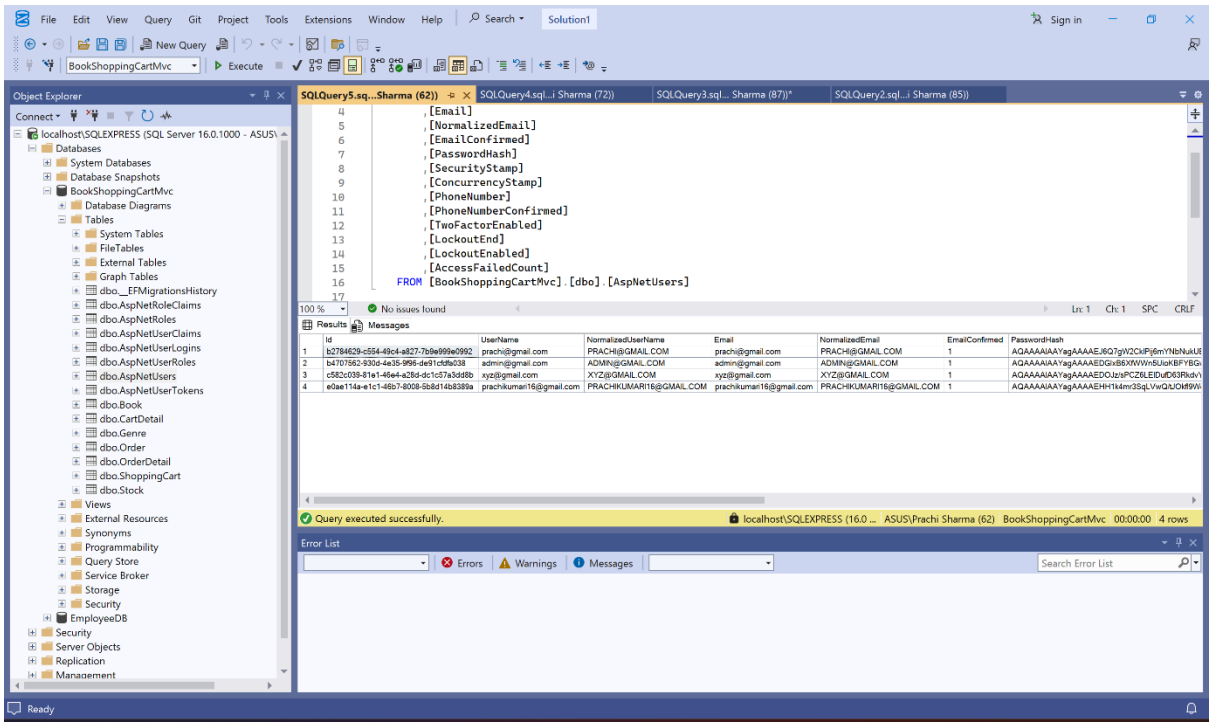

Figure - 15

Order

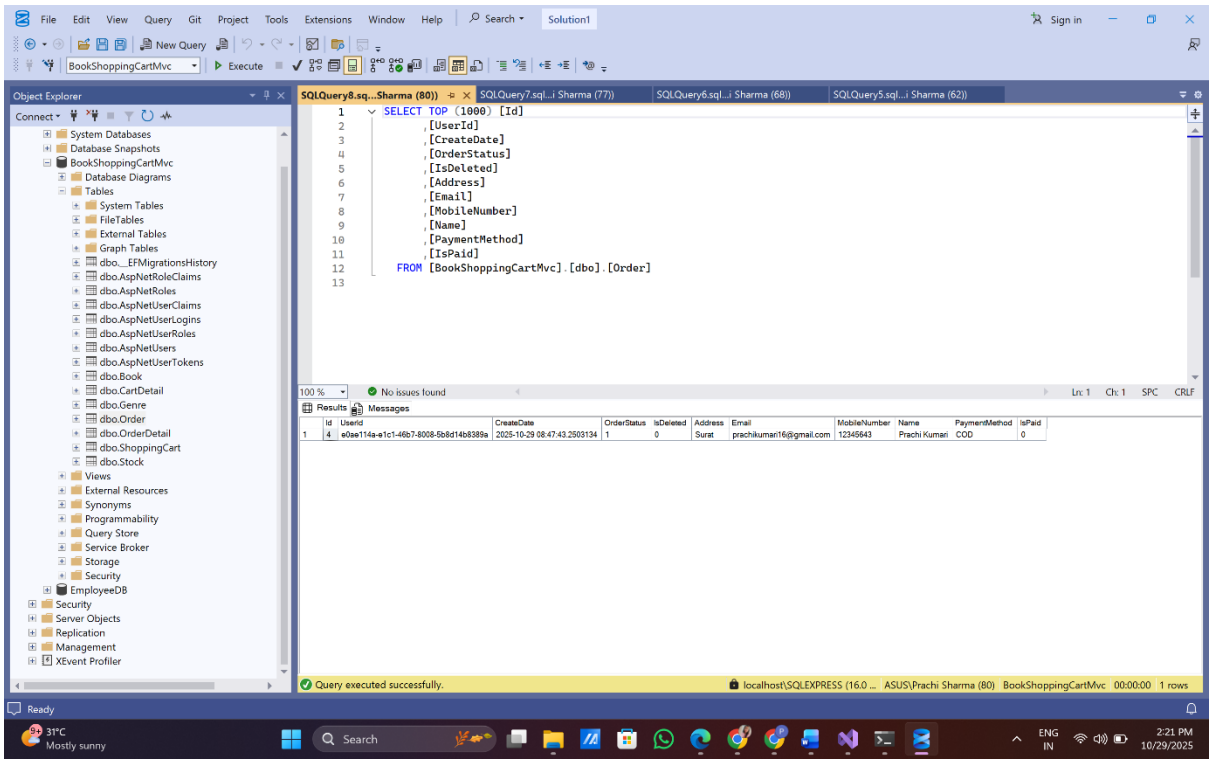

Figure - 16

Book Data

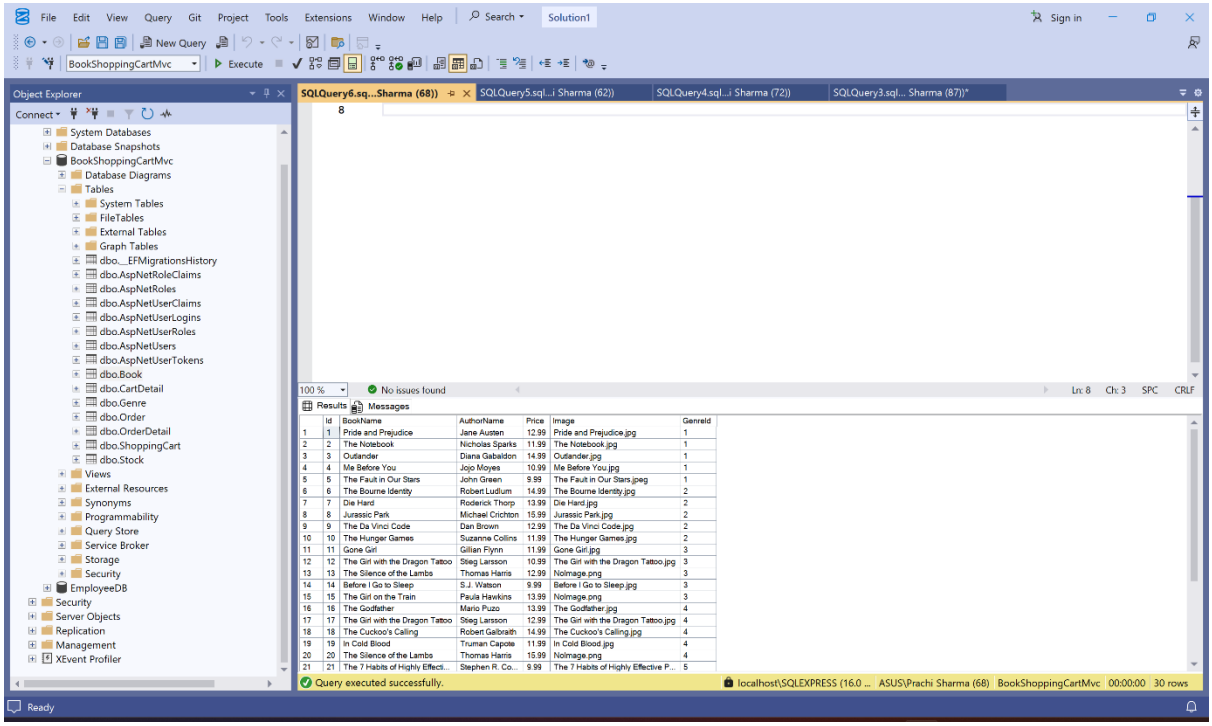

Figure - 17

Future Enhancements

- Integration with online payment gateways (Razorpay, Paytm).
- AI-based book recommendations.
- SMS/email notifications for users.
- Mobile app integration using Flutter or React Native.

Database Design

Table Name	Description
AspNetRoles	Contains different user roles like *Admin*, *Customer*, etc. used for access control.
AspNetUserRoles	Maps users to their assigned roles (many-to-many relationship).
AspNetUserClaims	Stores additional claims (custom permissions or data) for each user.

Table Name	Description
AspNetUserLogins	Stores information about external logins (if users log in via Google, Facebook, etc.).
AspNetUserTokens	Contains user tokens used for password reset, authentication, or two-factor verification.

Conclusion

The Book Shopping Cart MVC project successfully demonstrates the design and implementation of a modern e-commerce system using ASP.NET MVC and SQL Server. It provides an efficient, secure, and scalable platform for online book shopping and can be enhanced further with payment integration and AI-driven recommendations.