



INTERNSHIP REPORT

Ecommerce Website - (Eshop)

Yasin Ramzan Honnolli

2121

AFour Technologies Private Limited
(Name of the company)

Goa Business School
(Goa University)

Ecommerce Website



**Completed by
Yasin Ramzan Honnolli
2121**

**for the partial fulfillment of
MCA Degree for Semester IV
Discipline of Computer Science and Technology,
Goa Business School,
Goa University**

**At
AFour Technologies Private Limited
Unit No. 701, 7th floor, Sunteck Kanaka Corporate Park, patto, Panaji, Goa 403001**

**Under the guidance of
Gaurish Abhisheki
(Associate Director Of Engineering, at AFour Technologies Pvt. Ltd.)**

&

**Robinson Pires
(Technical Project Manager, at AFour Technologies Pvt. Ltd.)**

Date: 26 May 2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Yasin Ramzan Honnolli**, student of Master of Computer Applications (MCA) of Goa University, Goa, is currently undergoing his final semester project (Semester IV) at our organization, **AFour Technologies Pvt. Ltd.**, since March 23 and will complete by August 23.

During his tenure so far, he met the expectations of his team lead/mentor/guide and was regular and sincere.
This certificate is being issued on his request to be submitted with the project report at Goa University.

The final internship completion certificate will be provided on completing his internship.

For **AFour Technologies Pvt. Ltd.**

CHADHA
NEHA
RAVISH

Digitally signed by CHADHA NEHA RAVISH
DN: cn=CHADHA NEHA RAVISH, o=AFour Technologies Pvt. Ltd., ou=AFour Technologies Pvt. Ltd., email=chadha.neha@afourtech.com, c=IN
Date: 2023.05.26 11:11:11 +05'30'

Neha Chaddha

Senior HR - Manager

AFour Technologies Private Limited

Registered Office Address: Office # 501, 5th Floor, Sterling Tower, Wing B, Pan Card Club Road, Baner, Pune- 411045, Maharashtra.

Contact No: +91 9049459620 **Email:** contact@afourtech.com | **Website:** www.afourtech.com

GST NO-27AAGCA5712Q1ZA

CIN NO-U72200PN2007PTC130781

GOA UNIVERSITY



GOA BUSINESS SCHOOL

CERTIFICATE OF EVALUATION

This is to certify that Mr. Yasin Ramzan Honnolli has successfully completed his internship at AFour Technologies Private Limited, Unit No. 701, 7th floor, Sunteck Kanaka Corporate Park, patto, Panaji, Goa 403001, in partial fulfillment of the award of the degree in Master of Computer Application.

Examiner 1

Examiner 2

Place: Goa University
Date: **Friday, 16th June 2023**

Dean, Goa Business School

ACKNOWLEDGMENT

I would like to express my sincere gratitude to all those who have provided our team with valuable guidance and assistance throughout the course of our internship project. Without their support, it would have been incredibly challenging for us to achieve success in our endeavors.

First and foremost, I extend my heartfelt appreciation to our esteemed guides, Mr. Gaurish Abhisheki and Mr. Robinson Pires. Their invaluable expertise, constant support, and insightful advice have been instrumental in shaping the direction and outcome of our project. Their guidance has not only enhanced my knowledge and skills but also instilled in me a deep sense of dedication and professionalism.

I would also like to extend my thanks to my team members, Master Suraj Pandey and Aaron Desousa, who have been an integral part of our project. Their hard work, dedication, and collaborative spirit have contributed significantly to the success of our endeavor. The synergy within our team has been invaluable, and I appreciate their unwavering commitment.

Additionally, I am grateful to our internal guide, Ms. Teja Kundaikar, for her valuable guidance and constant support. Her expertise, patience, and willingness to assist us whenever needed have been indispensable. Ms. Kundaikar's insights and problem-solving skills have played a crucial role in overcoming challenges and achieving milestones throughout the project.

Furthermore, I would like to express my sincere appreciation to all the professors and faculty members who have provided encouragement and assistance during our internship. Their support and belief in our abilities have been a tremendous source of motivation and inspiration.

Finally, I would like to extend my gratitude to all the individuals who have contributed in any way to the success of our internship project. Whether through discussions, feedback, or simply offering a helping hand, their contributions have been invaluable, and I sincerely appreciate their involvement.

In conclusion, I would like to emphasize that expressing my acknowledgment is a challenging task. However, I wholeheartedly express my gratitude and indebtedness to everyone mentioned above for their guidance, assistance, and encouragement. Their support has been crucial in making our internship project a resounding success.



INTERNSHIP REPORT

Ecommerce Website - (Eshop)

Yasin Ramzan Honnolli

2121

AFour Technologies Private Limited
(Name of the company)

Goa Business School
(Goa University)

Ecommerce Website



**Completed by
Yasin Ramzan Honnolli
2121**

**for the partial fulfillment of
MCA Degree for Semester IV
Discipline of Computer Science and Technology,
Goa Business School,
Goa University**

**At
AFour Technologies Private Limited
Unit No. 701, 7th floor, Sunteck Kanaka Corporate Park, patto, Panaji, Goa 403001**

Under the guidance of

**Gaurish Abhisheki
(Associate Director Of Engineering, at AFour Technologies Pvt. Ltd.)**

&

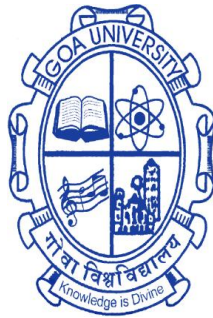
**Robinson Pires
(Technical Project Manager, at AFour Technologies Pvt. Ltd.)**



Neha Chaddha
Senior HR - Manager

CIN NO-U72200PN2007PTC130781

GOA UNIVERSITY



GOA BUSINESS SCHOOL

CERTIFICATE OF EVALUATION

This is to certify that Mr. **Yasin Ramzan Honnolli** has successfully completed his internship at AFour Technologies Private Limited, Unit No. 701, 7th floor, Sunteck Kanaka Corporate Park, patto, Panaji, Goa 403001, in partial fulfillment of the award of the degree in Master of Computer Application.

Examiner 1

Examiner 2

Place: Goa University
Date: **Friday, 16th June 2023**

Dean, Goa Business School

ACKNOWLEDGMENT

I would like to express my sincere gratitude to all those who have provided our team with valuable guidance and assistance throughout the course of our internship project. Without their support, it would have been incredibly challenging for us to achieve success in our endeavors.

First and foremost, I extend my heartfelt appreciation to our esteemed guides, Mr. Gaurish Abhisheki and Mr. Robinson Pires. Their invaluable expertise, constant support, and insightful advice have been instrumental in shaping the direction and outcome of our project. Their guidance has not only enhanced my knowledge and skills but also instilled in me a deep sense of dedication and professionalism.

I would also like to extend my thanks to my team members, Master Suraj Pandey and Aaron Desousa, who have been an integral part of our project. Their hard work, dedication, and collaborative spirit have contributed significantly to the success of our endeavor. The synergy within our team has been invaluable, and I appreciate their unwavering commitment.

Additionally, I am grateful to our internal guide, Ms. Teja Kundaikar, for her valuable guidance and constant support. Her expertise, patience, and willingness to assist us whenever needed have been indispensable. Ms. Kundaikar's insights and problem-solving skills have played a crucial role in overcoming challenges and achieving milestones throughout the project.

Furthermore, I would like to express my sincere appreciation to all the professors and faculty members who have provided encouragement and assistance during our internship. Their support and belief in our abilities have been a tremendous source of motivation and inspiration.

Finally, I would like to extend my gratitude to all the individuals who have contributed in any way to the success of our internship project. Whether through discussions, feedback, or simply offering a helping hand, their contributions have been invaluable, and I sincerely appreciate their involvement.

In conclusion, I would like to emphasize that expressing my acknowledgment is a challenging task. However, I wholeheartedly express my gratitude and indebtedness to everyone mentioned above for their guidance, assistance, and encouragement. Their support has been crucial in making our internship project a resounding success.

Table of Contents

ACKNOWLEDGMENT.....	5
Table of Contents.....	6
Introduction	7
Company profile	8
My Designation in Company and important roles performed as an Intern.....	9
Problem Statement.....	10
Overview	12
My contributions	14
Tools and Technologies Used	15
Architecture Diagram	17
Database Diagram	19
Site map	22
Screenshots	23
Concepts learnt	36
Future Enhancement	38
Conclusions	39
Internship Timeline	40
My experiences of internship	42
References	44

Introduction

This internship report presents an overview of the internship experience at AFour Technologies Private Limited, located at Unit No. 701, 7th floor, Sunteck Kanaka Corporate Park, Patto, Panaji, Goa 403001. The primary objective of this internship was to gain mastery in a specific technology through hands-on experience and practical application.

During the internship period, the designation assigned to me was Internship Trainee - Fullstack Developer. I had the privilege of working alongside a talented team consisting of Mast. Suraj Pandey and Aaron Desousa. Together, we were assigned the task of developing an e-commerce full stack website, with a specific focus on utilizing the .NET technology.

The overarching goal of this internship was to acquire a comprehensive understanding of the .NET technology stack, encompassing both the front-end and back-end development aspects. By working on a real-world project, we aimed to enhance our technical skills, gain practical experience in web development, and become proficient in utilizing .NET technology to build robust and scalable applications.

Furthermore, the internship provided an opportunity to apply theoretical knowledge acquired during academic studies in a professional setting. By working closely with experienced mentors and industry professionals, we sought to bridge the gap between classroom learning and practical implementation.

Upon completion of the internship, the following objectives and goals were set:

1. Demonstrate proficiency in utilizing .NET technology for web application development.
2. Acquire a comprehensive understanding of full-stack development, encompassing both front-end and back-end technologies.
3. Gain hands-on experience in building an e-commerce website from scratch, considering user experience, security, and scalability.
4. Develop effective problem-solving and debugging skills, essential for troubleshooting and maintaining web applications.
5. Enhance teamwork and collaboration abilities through active participation in a team-based project.
6. Strengthen communication and interpersonal skills through regular interaction with colleagues, mentors, and clients.

This internship report will provide an in-depth analysis of the experiences, challenges faced, lessons learned, and achievements attained during the internship period. It aims to reflect the growth and development that took place as a result of this valuable opportunity provided by AFour Technologies Private Limited.

Company profile

AFour Technologies is a leading software engineering and consulting company that specializes in providing cutting-edge solutions to businesses across various industries. With a global presence and a strong track record of delivering high-quality software services, AFour Technologies has established itself as a trusted partner for organizations seeking innovative technology solutions.

Established with a vision to transform businesses through technology, AFour Technologies offers a comprehensive range of services tailored to meet the diverse needs of its clients. The company's core expertise lies in product engineering, enterprise software development, quality engineering, and digital transformation.

AFour Technologies employs a team of highly skilled professionals who possess in-depth knowledge of emerging technologies and industry best practices. This talented workforce is dedicated to delivering superior results and exceeding client expectations. The company fosters a culture of continuous learning and innovation, encouraging its employees to stay at the forefront of technological advancements.

With a customer-centric approach, AFour Technologies strives to understand the unique requirements and challenges faced by each client. By leveraging its technical expertise and domain knowledge, the company provides tailored solutions that address specific business needs. AFour Technologies' commitment to quality is reflected in its stringent quality assurance processes, ensuring that each deliverable meets the highest standards of excellence.

AFour Technologies has successfully collaborated with clients from diverse sectors, including healthcare, finance, e-commerce, manufacturing, and more. The company has a proven track record of delivering successful projects, ranging from small-scale applications to large-scale enterprise solutions.

As a forward-thinking organization, AFour Technologies embraces emerging technologies and encourages innovation. The company stays abreast of the latest trends and advancements in areas such as DevOps, cloud computing, Big Data, machine learning, and the Internet of Things (IoT). By leveraging these technologies, AFour Technologies helps its clients stay ahead of the competition and achieve their digital transformation goals.

In summary, AFour Technologies is a trusted partner for businesses seeking reliable software engineering and consulting services. With its skilled workforce, client-centric approach, and focus on delivering innovative solutions, the company has earned a reputation for excellence. AFour Technologies continues to strive for technological advancement, fostering long-term partnerships and driving digital transformation for its clients.

My Designation in Company and important roles performed as an Intern

As an Internship Trainee - Fullstack Developer at AFour Technologies, I had the opportunity to work on a significant project focused on developing an e-commerce website using the .NET technology stack. During my internship, I undertook various roles and responsibilities, contributing to different aspects of the project. Some of the important roles and tasks I performed include:

1. **Web API Development:** I was actively involved in the development of web APIs using .NET technology. This involved designing and implementing RESTful APIs to facilitate seamless communication between the front-end and back-end components of the website. I worked on building APIs that handled user authentication, product management, cart functionality, and order processing.
2. **MVC .NET Razor:** I played a crucial role in utilizing the MVC (Model-View-Controller) architecture pattern with Razor syntax in .NET to create dynamic web pages. This involved developing server-side code to handle user requests, manage data flow, and generate responsive views that integrated with the front-end components.
3. **Blazor Technology:** As part of my internship, I also worked on the Blazor framework, which allowed me to develop interactive and responsive user interfaces using C# and Razor syntax. I leveraged Blazor to build components and pages that offered a seamless user experience and enhanced performance.
4. **Frontend Development:** I contributed to the frontend development of the e-commerce website, utilizing a combination of React and .NET technologies. I collaborated with the frontend team to implement user interfaces, develop responsive layouts, and integrate with the backend APIs to ensure smooth data flow and functionality.
5. **Database Management:** Throughout the project, I worked extensively with MySQL Server to handle database operations. This included designing the database schema, creating tables, defining relationships, and writing SQL queries to perform CRUD (Create, Read, Update, Delete) operations on data.

In addition to these technical roles, I actively participated in team meetings, code reviews, and discussions to ensure effective collaboration and adherence to project timelines. I also engaged in troubleshooting and debugging activities to resolve issues and optimize the performance of the e-commerce website.

By performing these crucial roles as an Internship Trainee - Fullstack Developer, I gained valuable hands-on experience in developing robust web applications, implementing APIs, and utilizing various frontend technologies. This internship provided me with an opportunity to apply

my theoretical knowledge and enhance my skills in a professional setting, further preparing me for a successful career in software development.

Problem Statement

E-commerce website development

Must have

1. Login page. Different roles. (Customer, Vendor, Admin etc)
2. We should land on a page where all of the available products are displayed. This is usually called the catalogue view.
3. We choose a product and get sent to another page which contains even more details about the product. This is usually called the product description view.
4. After revising everything about the product we confirm that we would like to purchase it. You do this by clicking a button which contains "Add to cart".
5. There is a Cart view where we will be able to see all the items added, we can increase or decrease the quantity and process to checkout.
6. On Checkout view there will be option to add offers and by applying the offer user will get the discount on valid offer
7. There will be virtual money (Wallet) which will be allotted by the admin to every user
8. On Payment View user will be able to do payment with virtual money
9. Email should be sent out once order placed
10. Order tracking view where user will track it
11. Admin will change the order status (dispatched / in transit / reach to nearby hub / delivered)
12. User should be able to search the product by name, description, category
13. Product availability should be marked within the range of pincode
14. Inventory/stock management should be provided for all the products to Admin user
15. Highlighted products should be displayed as carousel on top of landing page

Good to have

1. Order management
 - 1.1. Monthly revenue generated
 - 1.2. Category wise order flow
 - 1.3. Get the snapshot of remaining inventory
 - 1.4. Sales reports generated for products
2. Delivery module
 - 2.1. Delivery boy should get assigned the order
 - 2.2. He should be able to change the status and admin will approve it
 - 2.3. He should be able to mark order as delivered
 - 2.4. Live tracking of delivery once he changed the status as out for delivery

****Note:** You can take the reference of Amazon or Flipkart

Front End Guidelines:

1) Use MVC JQuery / Razor / Blazor for Front end.

Track – React in .NET

- MVC JQuery

- MVC Razor

- Blazor

- Mobile app with .NET MAUI

2) Use a CSS framework like Bootstrap or Material UI or equivalent.

3) Create reusable components.

4) Use Routing appropriately.

5) Learn and Use different State management techniques

Github Guidelines:

1) Create separate repositories for Frontend and backend

2) Create branches dev, master and production

3) You can point the production branch to deployment sites if you are using.(Optional)

4) Create branches based on a feature for example feature/registration, feature/dashboard

Backend Guidelines:

1) Use .NET REST Api for backend.

2) Use SQL / PostgreSQL as database

3) Implement Swagger documentation.

4) Use proper http verbs for endpoints. For ex GET,PUT,POST

5) Add Role based Authorization on the API endpoints.

Concepts learned

Frontend – React , Asp.NET

MVC – Basic C# ,Jquery, html , css, routing, State management , Razor, Blazor

.NET Api – Basic C#, Ado.NET , Api, Filters, Entity Framework, Data Annotations ,

Routing, Authentication, Authorization, Swagger, Postman, Micro services

RDBMS – Tables, Relations Indexes, Views, Triggers , SQL

Others – Stripe or some dummy payment.

Overview

Duration: March to June 2023

Company Information:

AFour Technologies Private Limited is located at Unit No. 701, 7th floor, Sunteck Kanaka Corporate Park, Patto, Panaji, Goa 403001. AFour Technologies operates in the software engineering and consulting industry, providing innovative solutions and services to businesses across various sectors. Their core focus is on product engineering, enterprise software development, quality engineering, and digital transformation.

Internship Objective:

The primary objective of the internship was to achieve mastery in .NET technology, Rest API's, React, and SQL databases. The internship aimed to provide hands-on experience and practical exposure to these technologies, enabling the development of skills and expertise in building robust web applications.

Role and Responsibilities:

As an Internship Trainee - Fullstack Developer, my role involved collaborating with the team to understand tasks and timelines. I was responsible for both frontend and backend development, which included working on web APIs, creating MVC applications using .NET, implementing React components, and managing MySQL databases.

Technologies and Tools Used:

The internship involved utilizing a range of technologies and tools, including:

- Backend Development: .NET (Web API, MVC Razor, Blazor)
- Frontend Development: React, Material UI
- Databases: SQL (MySQL)
- Payment Integration: Razor Pay
- Email Integration: SendGrid SMTP API

Key Learnings and Achievements:

Throughout the internship, I gained valuable learnings and achieved significant milestones, including:

- Developing proficiency in .NET technology, Rest API's, React, and SQL databases.
- Gaining hands-on experience in building web applications using various .NET frameworks and libraries.
- Implementing RESTful web APIs for seamless communication between frontend and backend components.
- Designing and developing responsive and interactive user interfaces using React and Material UI.

- Successfully integrating payment functionality using Razor Pay and implementing email invoice generation with the SendGrid SMTP API.

Future Goals:

Based on the internship experience, my future goals include utilizing the knowledge and skills gained to explore mobile development in .NET. I aspire to further enhance my expertise in the field of .NET technology and pursue a career path that leverages my proficiency in fullstack

web development.

In summary, the internship at AFour Technologies provided an opportunity to master .NET technology, Rest API's, React, and SQL databases. By actively contributing to frontend and backend development tasks, utilizing various tools and technologies, and achieving significant milestones, the internship enabled valuable learnings and sets the foundation for future career growth.

My contributions

During the course of the e-commerce project, I made significant contributions in various aspects, collaborating with my team members and actively participating in the development process. Here are the key contributions I made:

1. **Web API Development:** I played a crucial role in the development of web APIs for the project. Specifically, I focused on implementing JWT token authentication for secure user authentication and authorization. This involved designing and developing the necessary endpoints and integrating them into the project.
2. **SQL Database Management:** I took responsibility for handling SQL database tasks within the project. This included tasks such as database schema design, creating tables, defining relationships, and implementing CRUD operations using Database Management with Entity Framework and LINQ Queries. By efficiently managing the database, I ensured smooth data storage and retrieval for the e-commerce website.
3. **Payment Integration:** I successfully integrated the RazorPay payment gateway into the project. This involved implementing the necessary backend APIs to handle payment transactions and ensuring a seamless payment experience for users. By enabling secure and convenient online payments, I contributed to the overall functionality and user experience of the e-commerce platform.
4. **Invoicing via SendGrid SMTP API:** I incorporated the SendGrid SMTP API to enable the sending of invoices and bills via email. By integrating this functionality, I streamlined the process of generating and delivering invoices to customers, enhancing the efficiency and professionalism of the e-commerce platform.
5. **Full Stack Development Collaboration:** I actively collaborated with my team members, ensuring effective coordination between frontend and backend development tasks. While my role primarily focused on .NET technology for both backend and frontend, I worked closely with my teammates to ensure smooth integration of React components into the .NET-based application. This collaborative effort allowed us to leverage each other's expertise and foster a peer learning environment.
6. **Peer Learning Initiative:** To enhance our knowledge and proficiency in both .NET and React, my team and I implemented a peer learning initiative. We dedicated specific days or hours each week to teach and learn from each other. In this initiative, I took the lead in teaching my teammates .NET concepts and best practices, while they shared their knowledge and insights on React. This approach not only saved learning time but also allowed us to expand our skill sets and gain a deeper understanding of both technologies.

Overall, my contributions in this e-commerce project encompassed web API development, SQL database management, payment integration, invoicing via SendGrid SMTP API, and active collaboration in fullstack development. Through teamwork, peer learning, and effective utilization of technologies, I played an integral role in the successful execution of the project and gained valuable insights into both .NET and React, enriching my overall skill set as a fullstack developer.

Tools and Technologies Used:

During the development of the e-commerce project, a wide range of tools and technologies were employed to ensure efficient and effective implementation. The following tools and technologies were utilized:

1. Backend Development:

- .NET REST API: Used for developing the backend of the e-commerce platform, providing a robust and scalable foundation for the application.
- .NET MVC Razor: Employed to create dynamic web pages with server-side code and Razor syntax, facilitating seamless integration of frontend and backend components.
- .NET Blazor: Utilized for building interactive and responsive user interfaces, enabling the creation of a single-page application experience.

2. Frontend Development:

- React: Implemented for developing the frontend of the e-commerce website, providing a rich and interactive user interface.
- Asp.NET: Used in conjunction with React for frontend development, offering a comprehensive framework for web application development.

3. Database Management with Entity Framework and LINQ Queries:

- Throughout the project, I actively engaged in database management using Entity Framework, a powerful object-relational mapping (ORM) framework, and LINQ queries. I utilized Entity Framework to interact with the SQL Server database, abstracting away the complexities of writing raw SQL queries. I designed the database schema, created tables, defined relationships, and performed CRUD (Create, Read, Update, Delete) operations using LINQ queries. By effectively managing the database using Entity Framework and LINQ, I ensured the secure and reliable storage of critical data related to products, orders, and user information.

4. Security and Authorization:

- JWT Token: Utilized for implementing secure user authentication and authorization, ensuring role-based access control to API endpoints.
- Authentication and Authorization: Leveraged to protect API endpoints and restrict access based on user roles.

5. Payment Integration:

- Razorpay Payment Gateway: Integrated into the e-commerce platform to enable secure and seamless online payment transactions.

6. Email Communication:

- SendGrid API: Utilized for sending invoices and bills via email, providing a reliable and efficient communication channel.

7. CSS Frameworks:

- Bootstrap: Utilized for responsive and mobile-first web design, ensuring a consistent and visually appealing user interface.
- Material UI: Employed to implement a modern and visually appealing design language, enhancing the user experience.

8. Development Collaboration and Version Control:

- GitHub: Utilized as a collaborative platform for code sharing, version control, and team collaboration.

9. Additional Backend Technologies:

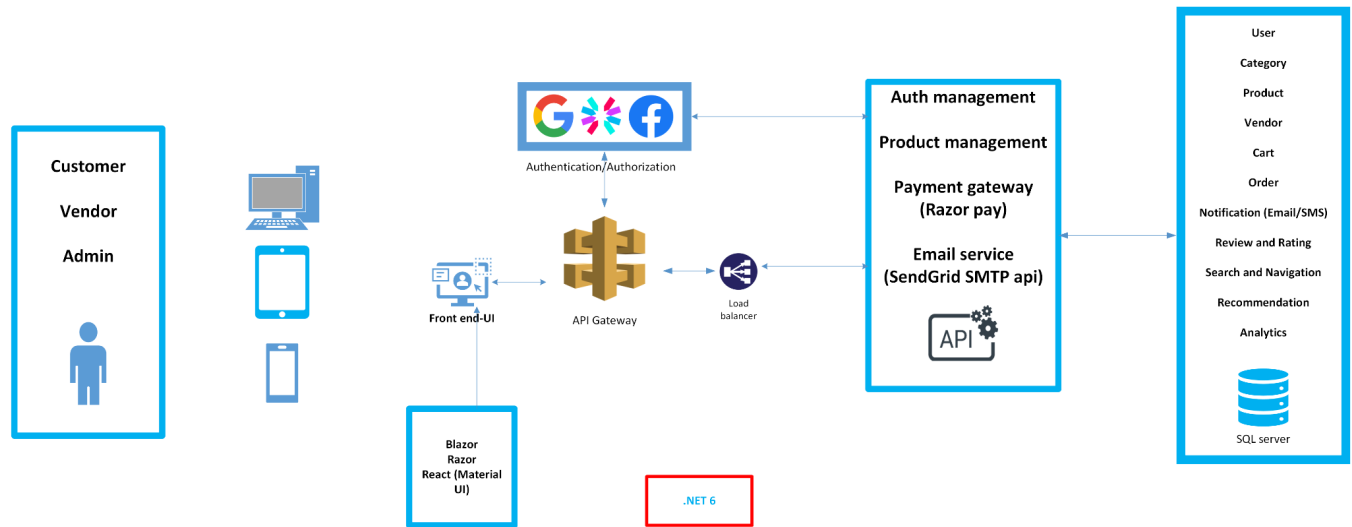
- C#: Used as the primary programming language for backend development, providing a robust and expressive language for building applications.
- Entity Framework: Employed for data access and manipulation within the backend, facilitating communication with the database.
- Filters: Utilized to implement cross-cutting concerns and perform pre and post-processing actions on API requests and responses.
- Swagger: Implemented for API documentation, allowing easy exploration and testing of API endpoints.
- Postman: Utilized for testing and validating API endpoints during development.
- Microservices: Employed as an architectural approach for designing and building scalable and modular backend services.

10. Relational Database Management System (RDBMS):

- Tables, Relations, Indexes, Views, Triggers: Utilized to design and manage the database schema, ensuring efficient storage and retrieval of data.

In summary, the e-commerce project involved the use of various tools and technologies, including .NET REST API, .NET MVC Razor, .NET Blazor, React, SQL Database, JWT Token, Razorpay Payment Gateway, SendGrid API, Bootstrap, Material UI, C#, ADO.NET, Entity Framework, GitHub, and more. These tools and technologies were carefully selected to ensure the development of a robust, secure, and user-friendly e-commerce platform.

Architecture Diagram



The architecture diagram of the e-commerce website developed using .NET 6 Frontend Technologies:

Razor: Used for server-side rendering and generating dynamic HTML pages.

React: Employed for building responsive and interactive user interfaces, utilizing Material Design components.

Blazor: Used as the main application, providing a single-page application (SPA) experience for the users.

Backend Technologies:

C# .NET API: Backend code developed in C# .NET, shared between the Blazor application and the React admin/vendor sections.

User Roles:

Customer: Represents regular users of the e-commerce website.

Vendor: Refers to users who are registered as vendors on the platform.

Admin: Denotes the administrators responsible for managing the website.

Device Compatibility:

The website is designed to be compatible with various devices, including mobiles, tablets, and PCs, ensuring a seamless user experience across different screen sizes.

API Gateway:

Utilized for handling JWT token-based authentication, allowing users to securely access protected resources.

Future enhancement: Integration of Google and Facebook login for a wider range of authentication options.

Load Balancer:

Implemented to distribute incoming network traffic across multiple servers, ensuring high availability and scalability of the application.

Core Functionalities:

Authentication Management APIs: Developed for user registration, login, and role-based authorization.

Product Management APIs: Facilitate CRUD operations for managing products, including retrieval, addition, and modification.

Payment Gateway: Integrated with Razorpay to offer multiple payment options for customers.

Future enhancement: Cash on Delivery (COD) option to be implemented.

Email Service: Utilizing SendGrid SMTP API to send invoices via email immediately after successful order placement and payment.

Database Management:

SQL Server Management Studio: Used to store various data related to users, including roles, names, emails, addresses, and more.

Category: Contains hierarchical information about product categories, facilitating organized product management.

Vendor: Stores details specific to vendors, such as addresses and pin codes.

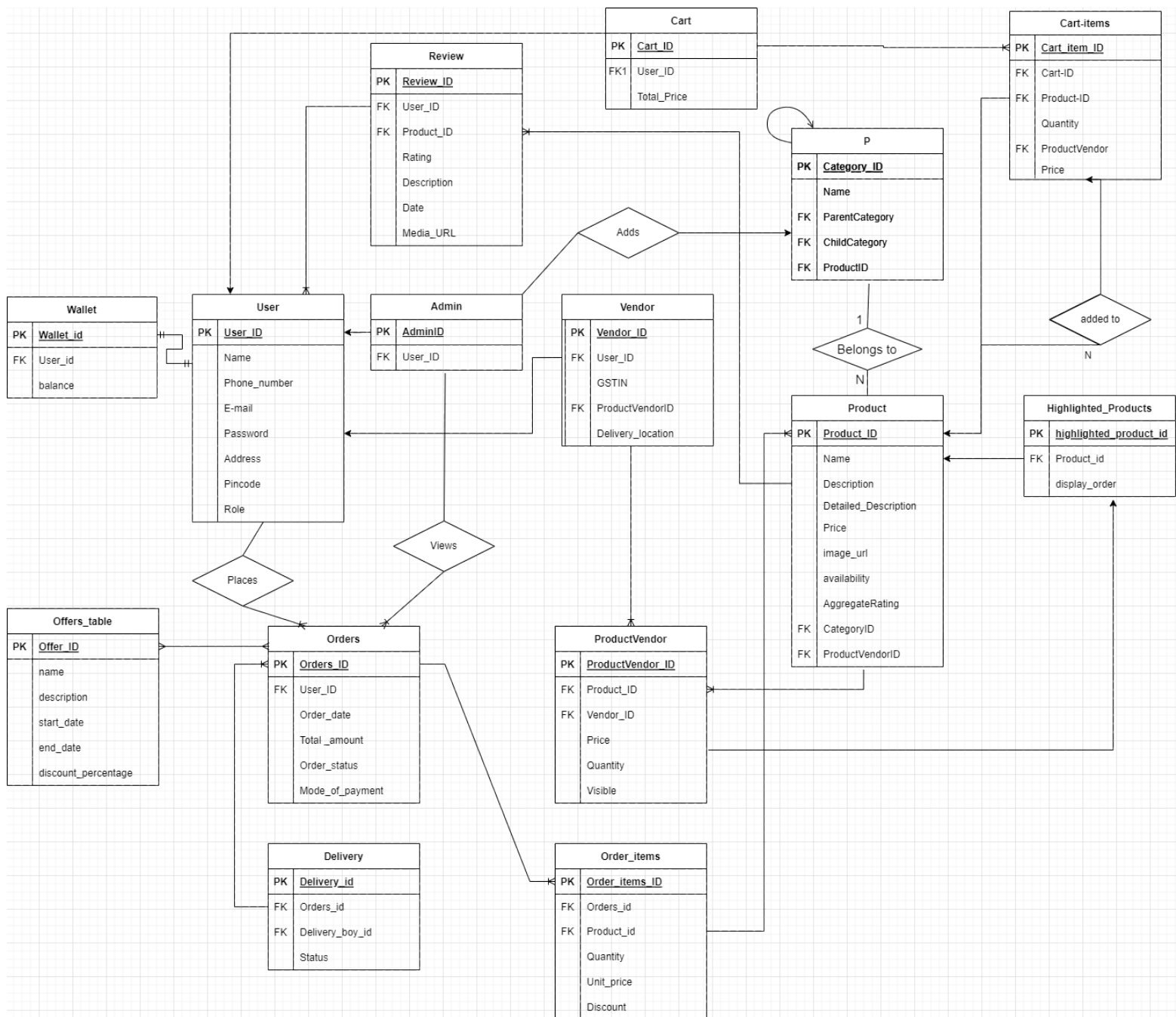
Order: Maintains order details for future reference, including information necessary for refunds, exchanges, and other operations.

Notifications: Enables sending email/SMS notifications to users, such as order status updates, review and rating requests, and recommendations.

Analytics: Provides insights into user behavior, search patterns, and navigation patterns, allowing for data-driven decision-making.

Overall, this architecture ensures a robust and scalable e-commerce website with well-defined functionalities, efficient data management, and enhanced user experiences.

Database Diagram



The database diagram for the Ecommerce web app can be described as follows:

The database schema consists of several tables that store information related to users, vendors, products, categories, orders, carts, deliveries, offers, reviews, and wallets. Here is a brief description of each table:

1. User Table:

- Stores user information such as name, phone number, email, address, and password.

2. Vendor Table:

- Contains vendor-specific information, including a foreign key reference to the User table, GSTIN, and delivery pincode.

3. Admin Table:

- Represents the admin users of the system and references the User table.

4. Product Vendor Table:

- Associates vendors with their respective products, including information such as price, quantity, and listing visibility.

5. Product Table:

- Stores details about the products available in the Ecommerce platform, including name, description, category (foreign key reference to the Category table), image, base price, detailed description, and availability.

6. Category Table:

- Represents different categories for the products and includes information such as name, description, and references to parent and child categories.

7. Order Table:

- Stores order-related information such as the user who placed the order (foreign key reference to the User table), order date, order status, mode of payment, and total amount.

8. Order Items Table:

- Associates products with the corresponding orders, including information about the quantity, unit price, and discounts applied.

9. Cart Items Table:

- Represents the items added to the user's cart and includes information about the product, quantity, unit price, product vendor (foreign key reference to the Product Vendor table), and the cart it belongs to (foreign key reference to the Cart table).

10. Cart Table:

- Stores information about the user's cart, including a reference to the user, the cart items associated with it, and the total amount.

11. Delivery Table:

- Represents the deliveries made for orders and includes information about the order (foreign key reference to the Order table), delivery status, and the delivery person (foreign key reference to the User table).

12. Offers Table:

- Stores information about promotional offers available in the Ecommerce platform, including the name, description, start date, end date, and discount percentage.

13. Review Table:

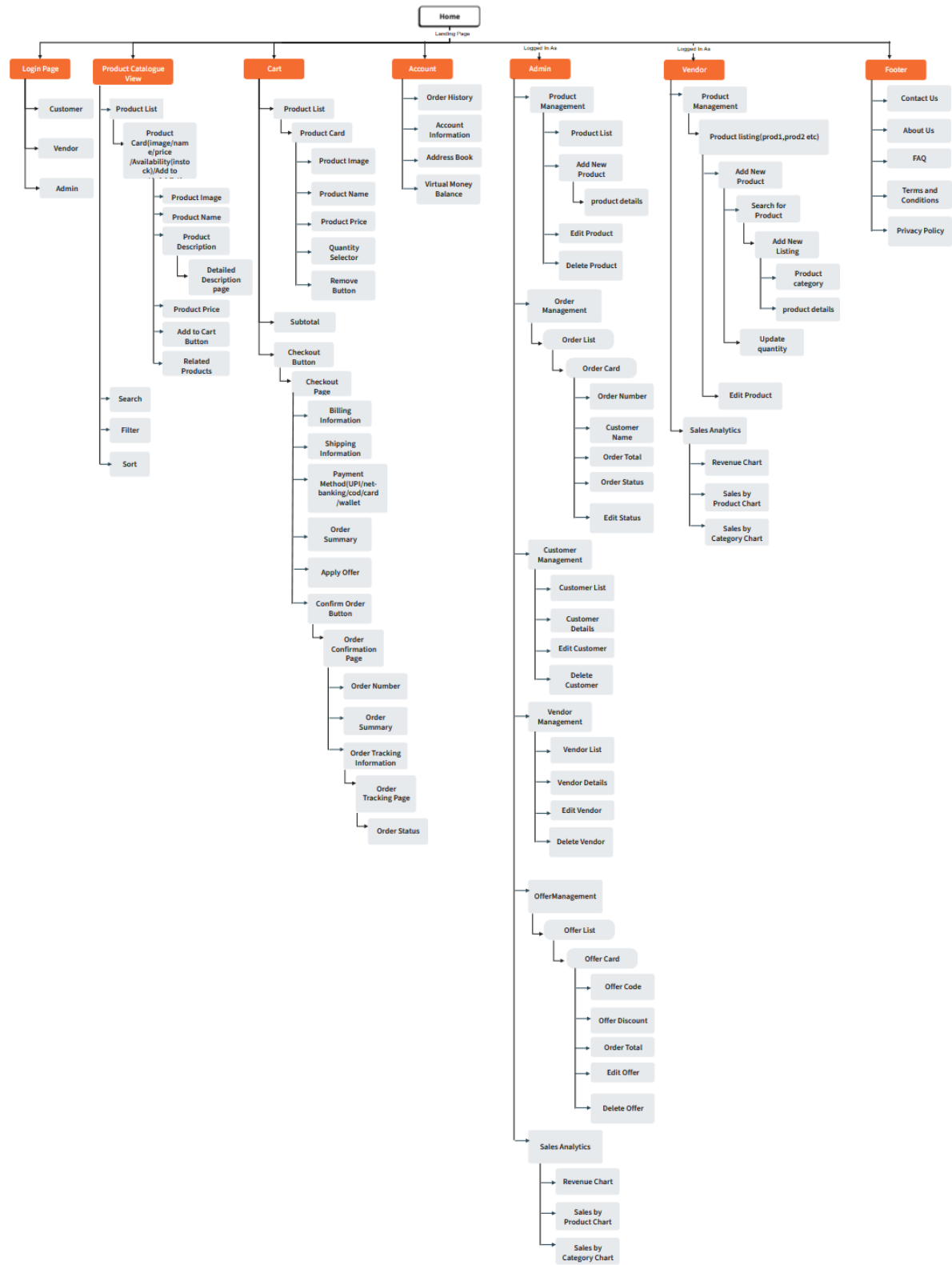
- Associates user reviews with specific products, including information about the user (foreign key reference to the User table), product (foreign key reference to the Product table), rating, review text, date, and media (such as images or videos).

14. Wallet Table:

- Stores information about user wallets, including the user (foreign key reference to the User table) and the wallet amount.

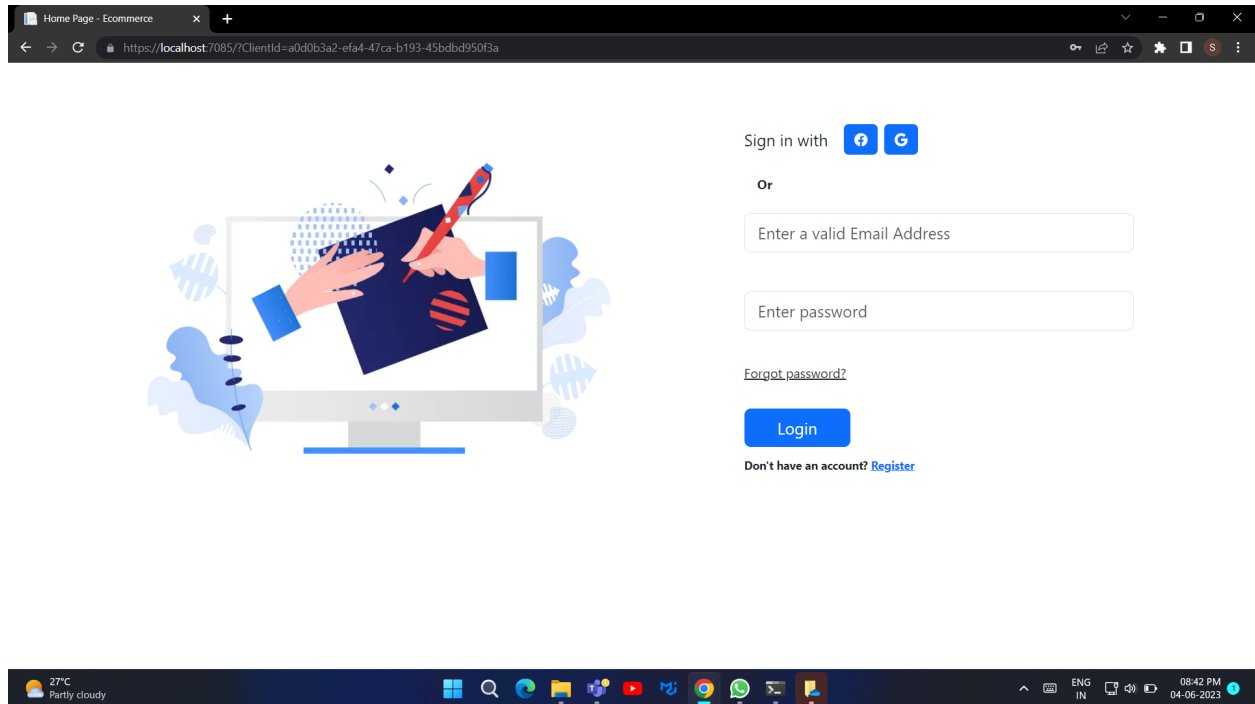
This database schema facilitates efficient data management and supports the functionality of the Ecommerce web app, enabling user registration, product management, order processing, cart management, delivery tracking, promotions, and user reviews.

Sitemap



Screenshots



Login page



The screenshot shows a web browser window with the title "Home Page - Ecommerce". The address bar displays the URL "https://localhost:7085/?ClientId=a0d0b3a2-efa4-47ca-b193-45bdbd950f3a". The page features a large illustration on the left showing a hand pointing at a computer screen with a red pen, surrounded by blue silhouettes of people. On the right, the login form includes a "Sign in with" section with Facebook and Google icons, an "Or" separator, and input fields for "Enter a valid Email Address" and "Enter password". Below these fields are links for "Forgot password?", a blue "Login" button, and a link for "Don't have an account? Register". The Windows taskbar at the bottom shows the date and time as 08:42 PM on 04-06-2023.

Home Page - Ecommerce

https://localhost:7085/?ClientId=a0d0b3a2-efa4-47ca-b193-45bdbd950f3a

Sign in with  

Or

Enter a valid Email Address

Enter password

[Forgot password?](#)

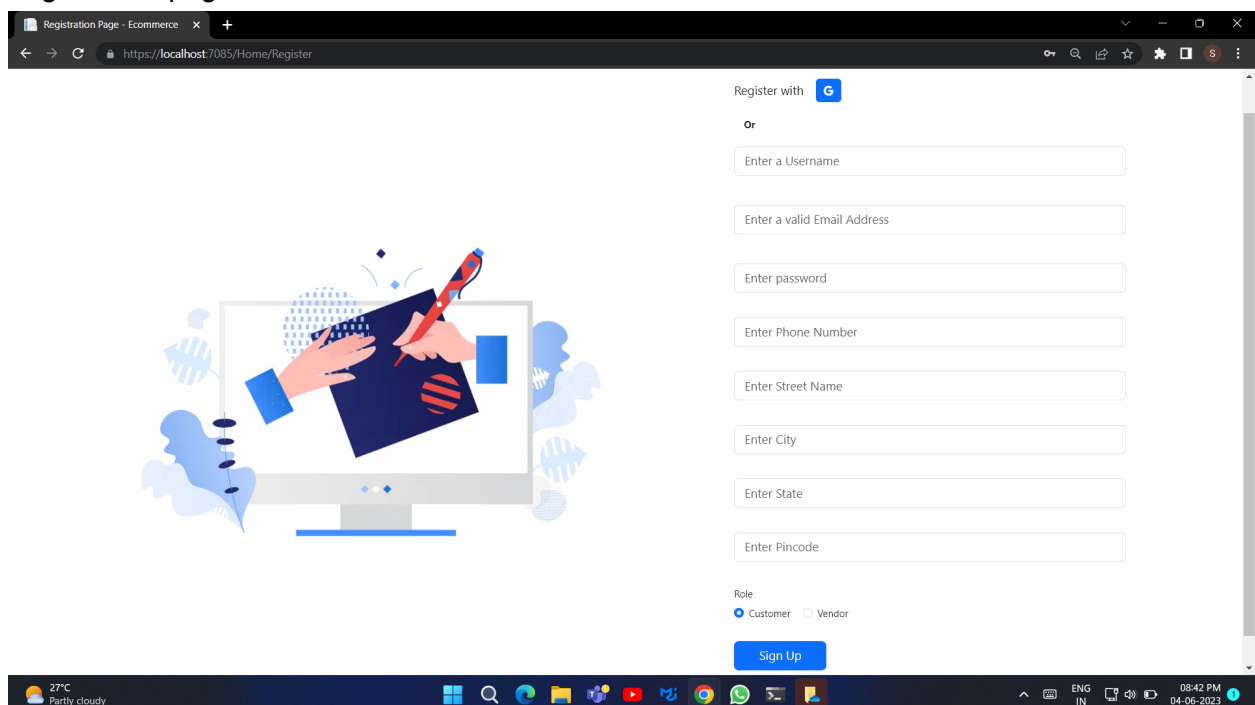
[Login](#)

Don't have an account? [Register](#)

27°C Partly cloudy

08:42 PM 04-06-2023


Registration page



The screenshot shows a web browser window with the title "Registration Page - Ecommerce". The address bar displays the URL "https://localhost:7085/Home/Register". The page features the same large illustration on the left as the login page. On the right, the registration form includes a "Register with" section with a Google icon, an "Or" separator, and input fields for "Enter a Username", "Enter a valid Email Address", "Enter password", "Enter Phone Number", "Enter Street Name", "Enter City", "Enter State", and "Enter Pincode". Below these fields are radio buttons for "Role" (Customer and Vendor), and a blue "Sign Up" button. The Windows taskbar at the bottom shows the date and time as 08:42 PM on 04-06-2023.

Registration Page - Ecommerce

https://localhost:7085/Home/Register

Register with 

Or

Enter a Username

Enter a valid Email Address

Enter password

Enter Phone Number

Enter Street Name

Enter City

Enter State

Enter Pincode

Role

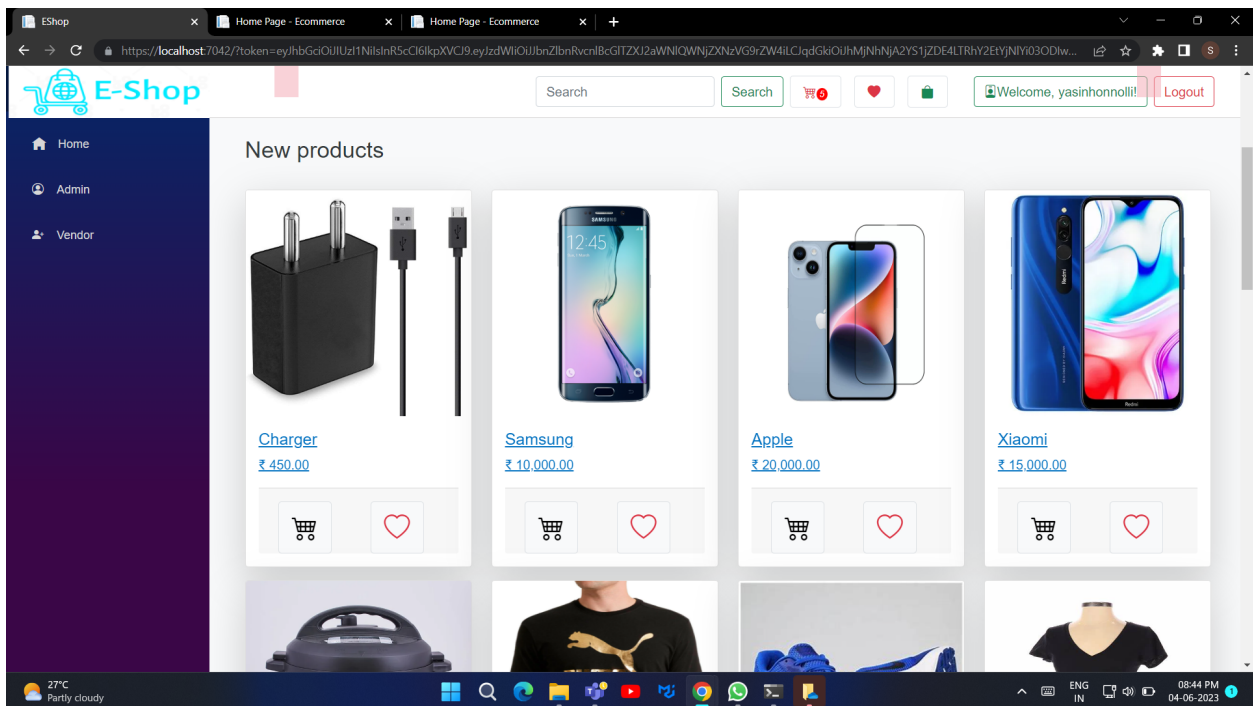
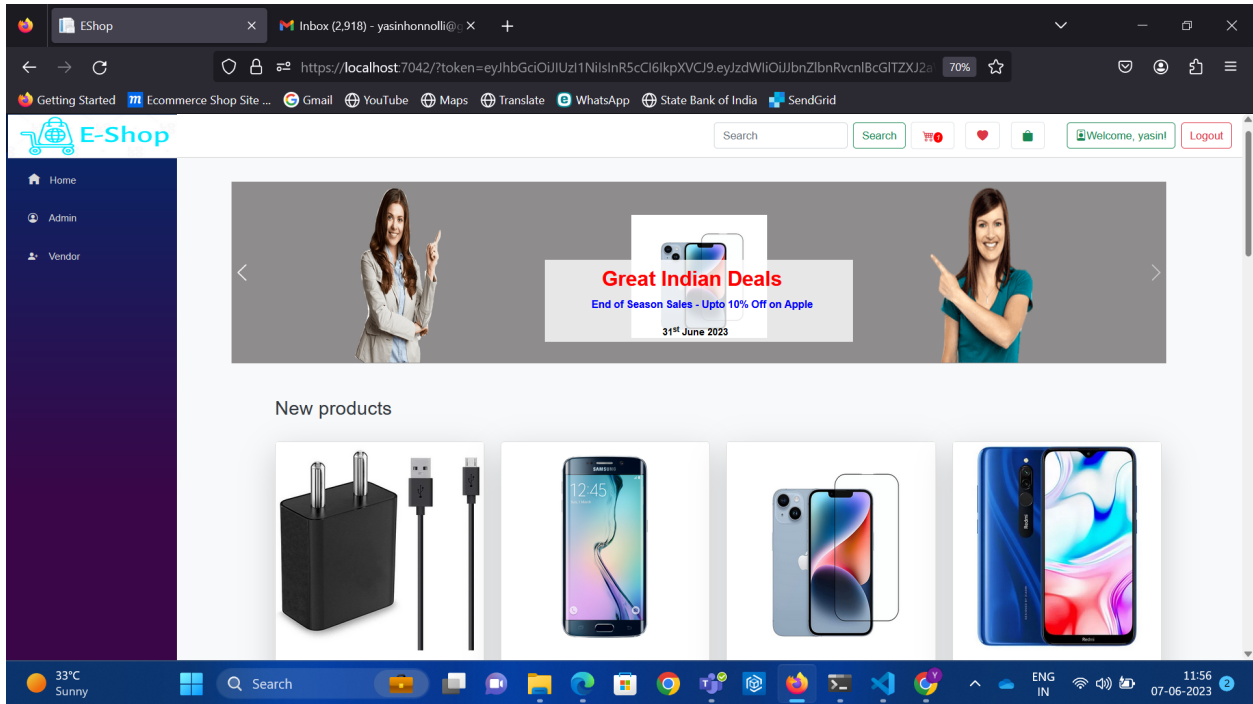
☒ Customer ☐ Vendor

[Sign Up](#)

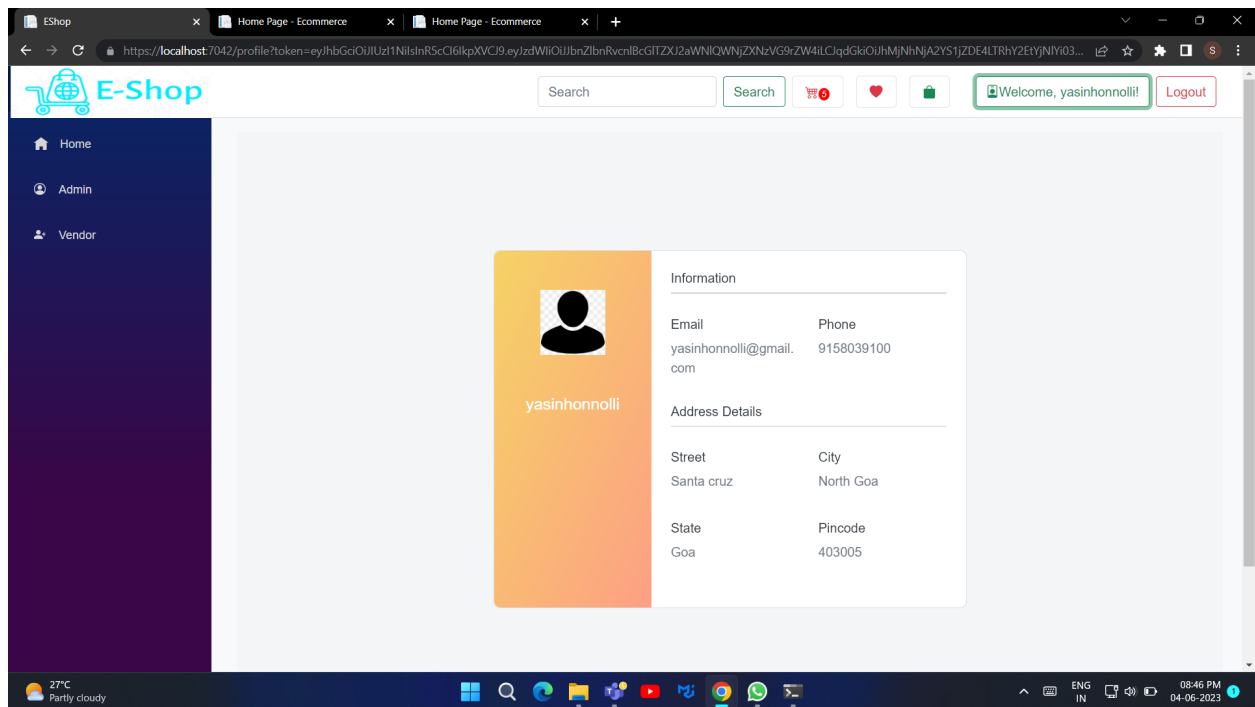
27°C Partly cloudy

08:42 PM 04-06-2023

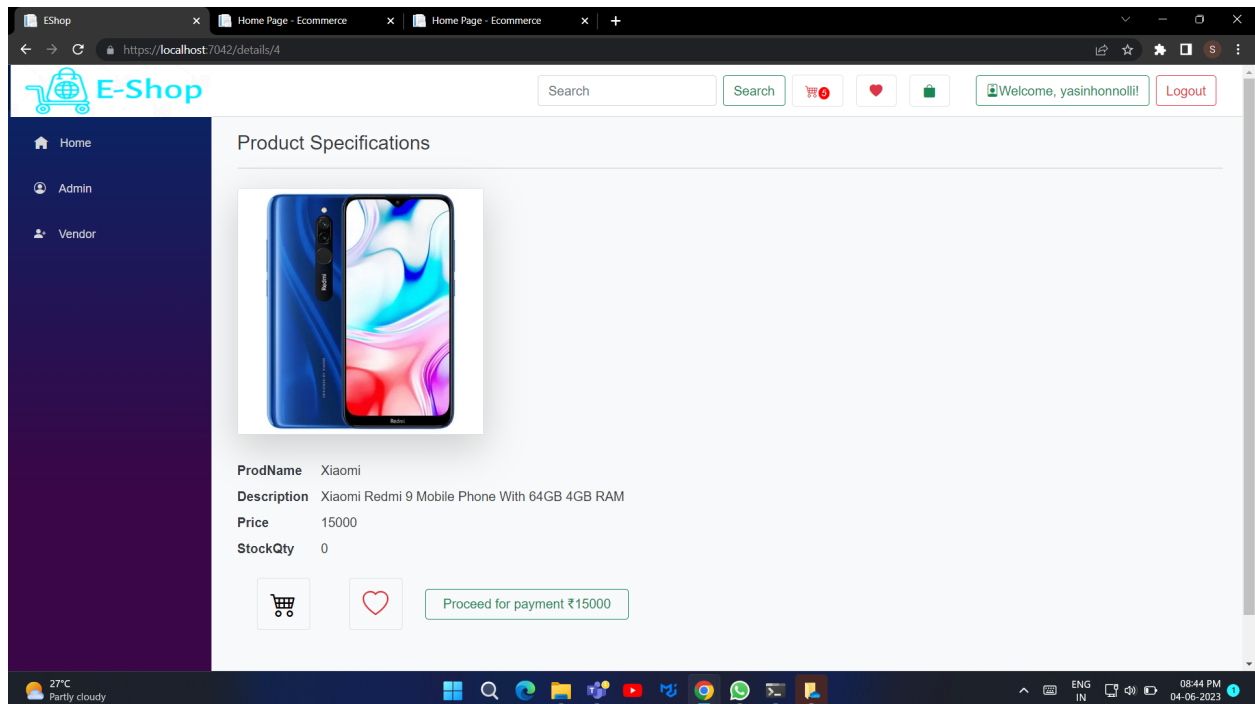
Customers web app



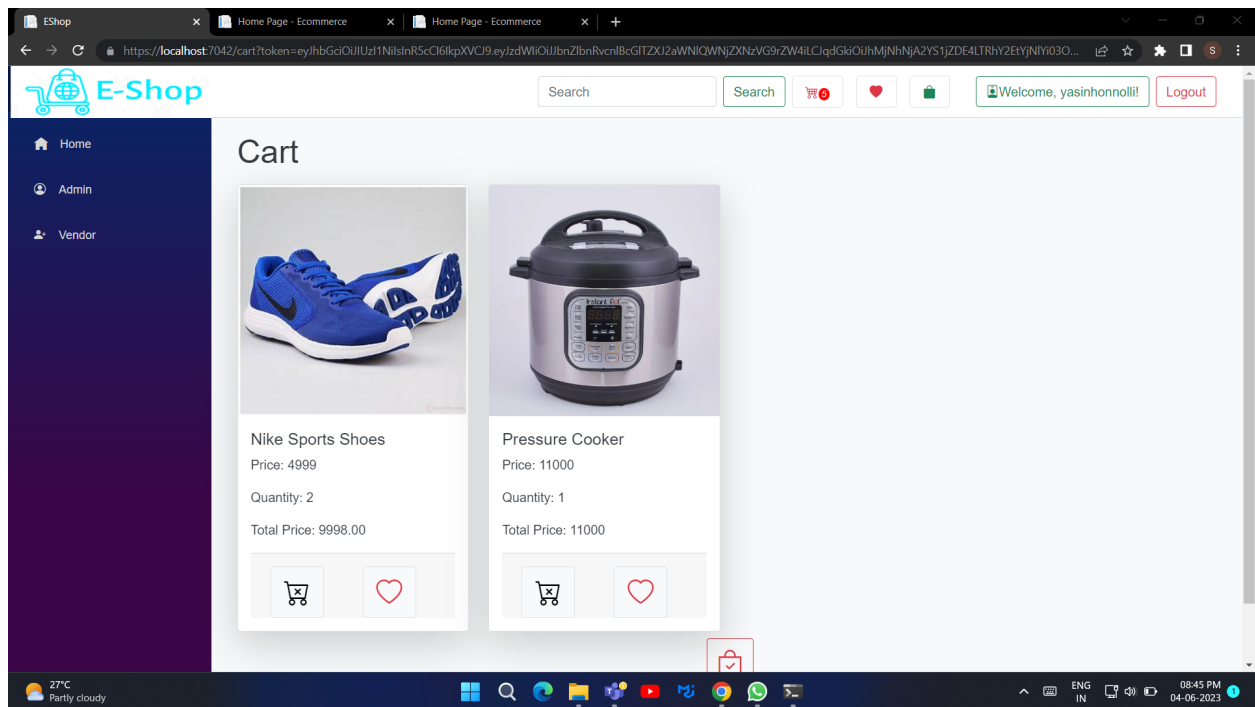
User Profile page



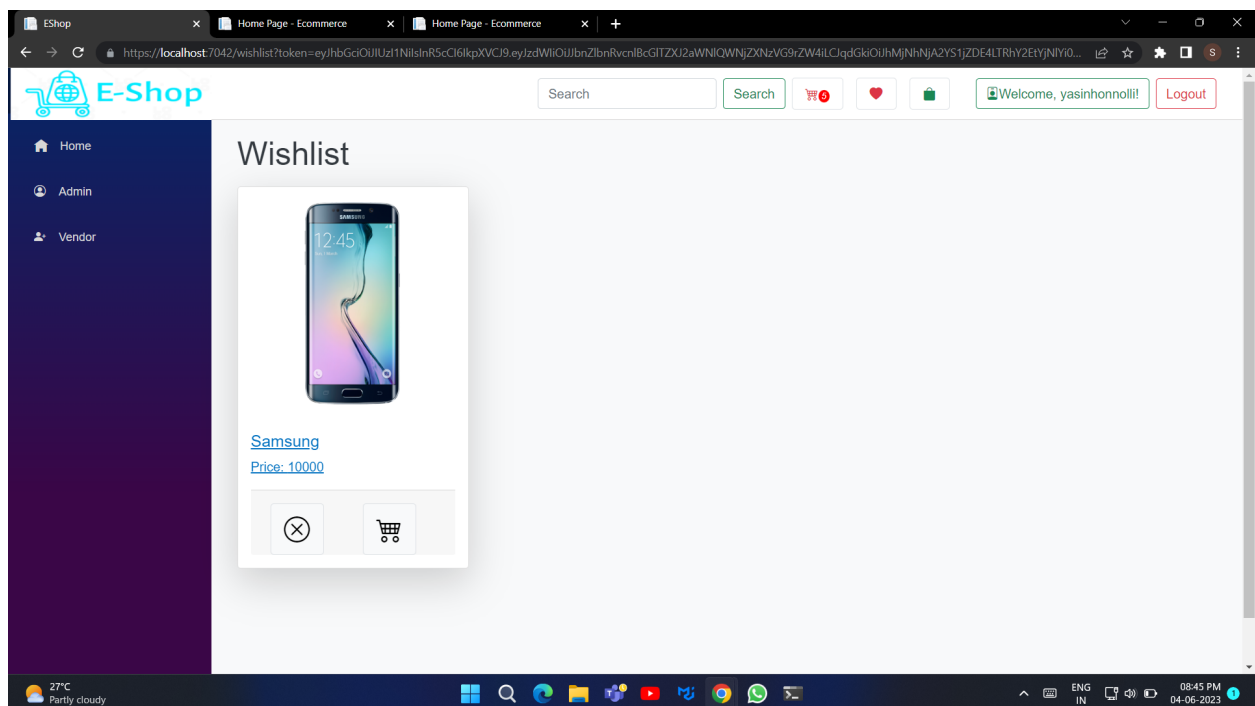
Products details



Cart

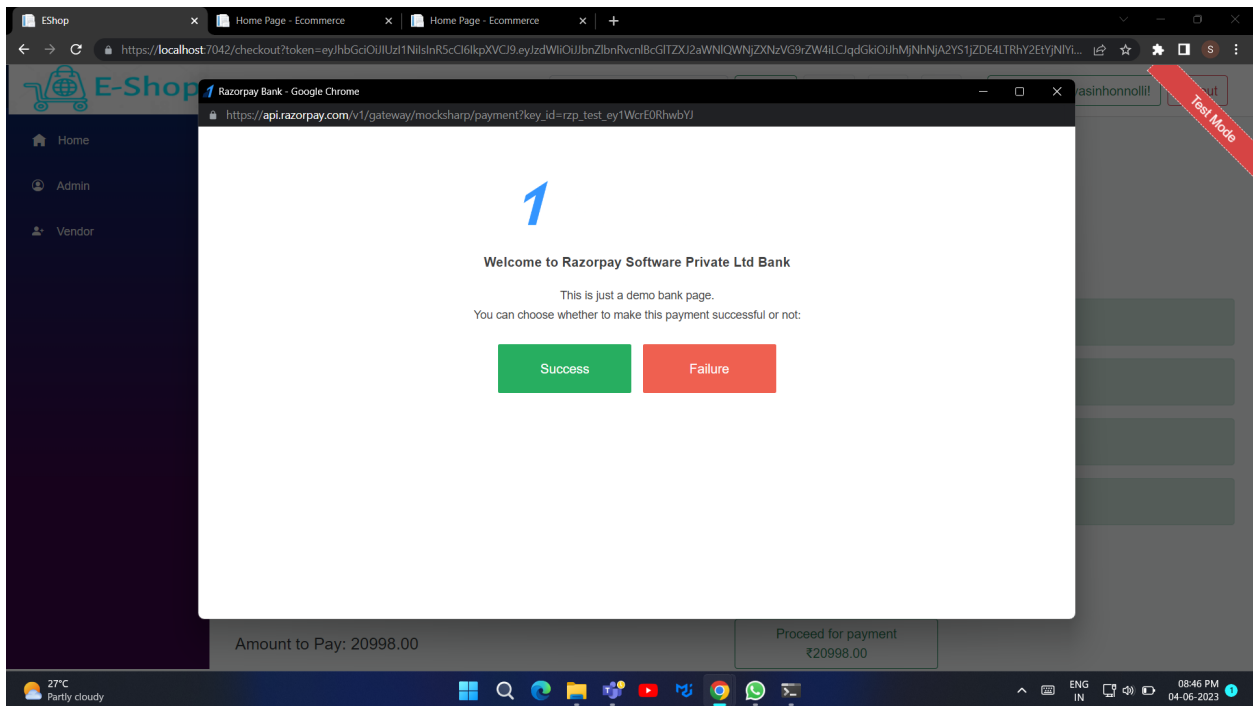
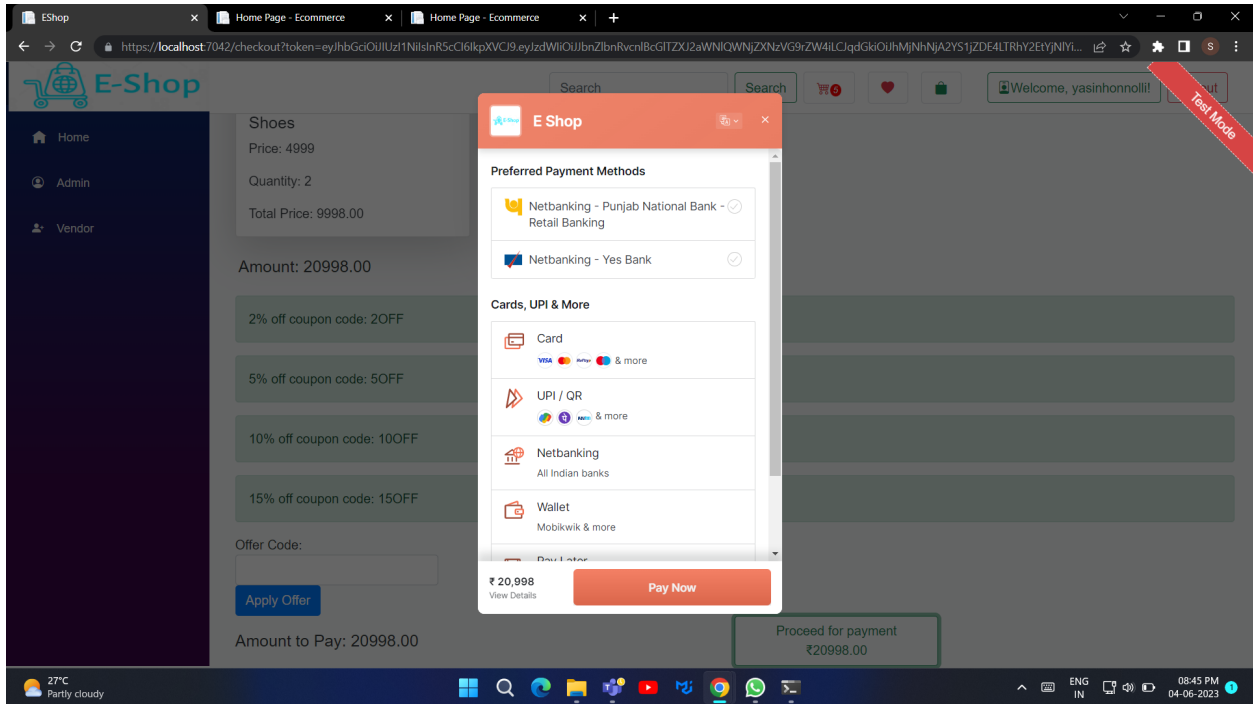


Wishlist

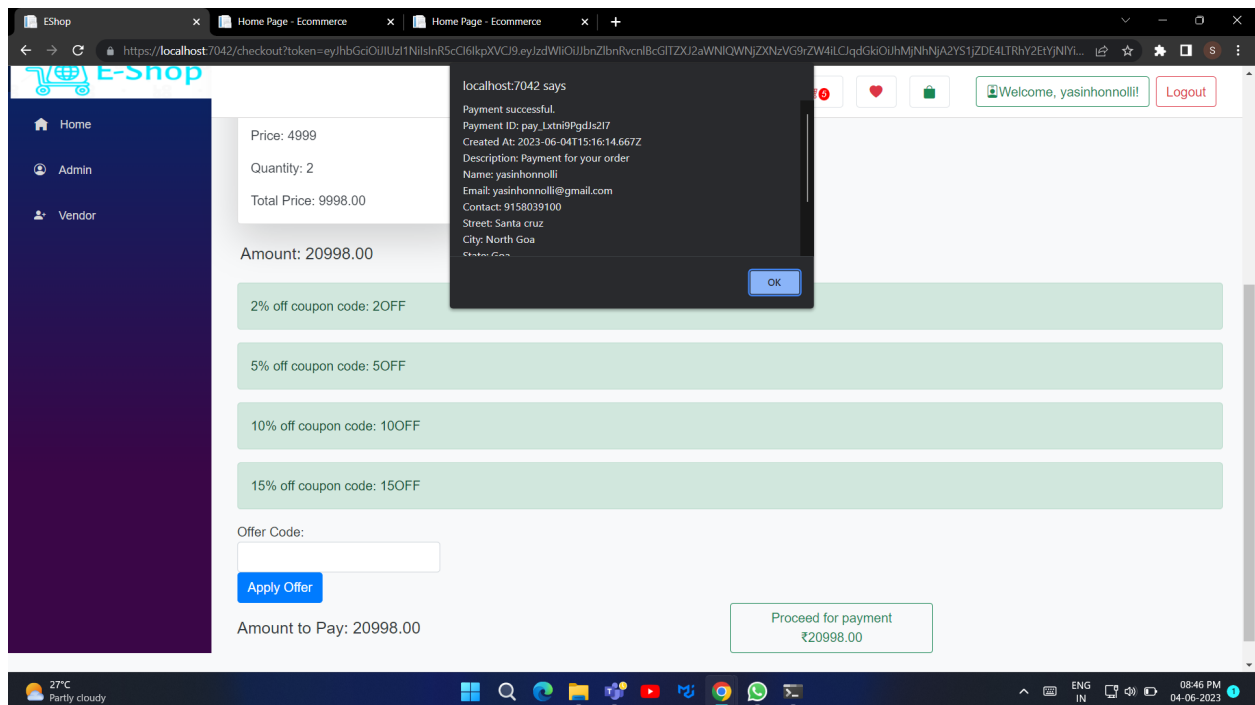
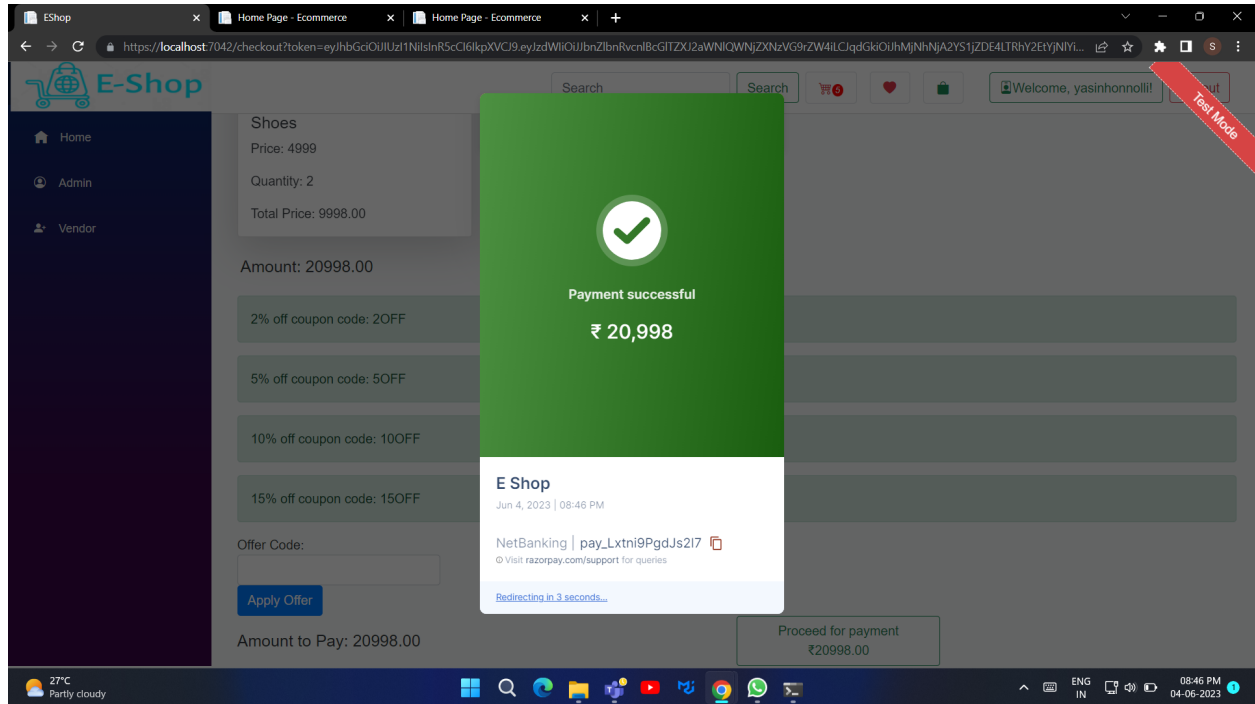


[illegible]

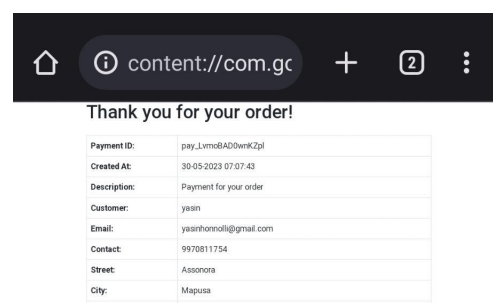
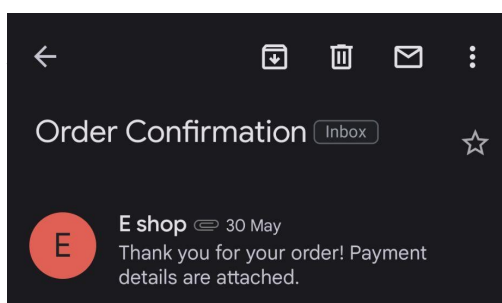
Payment



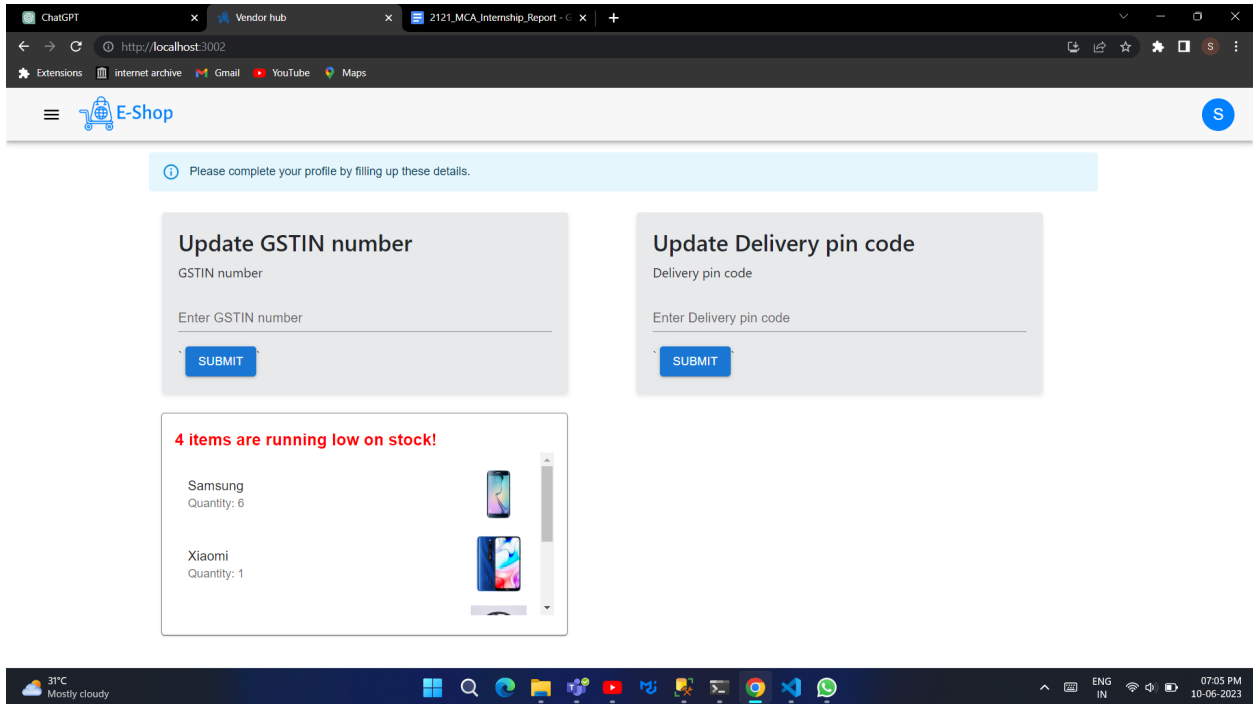
Payment confirmation



Invoice sent on mail

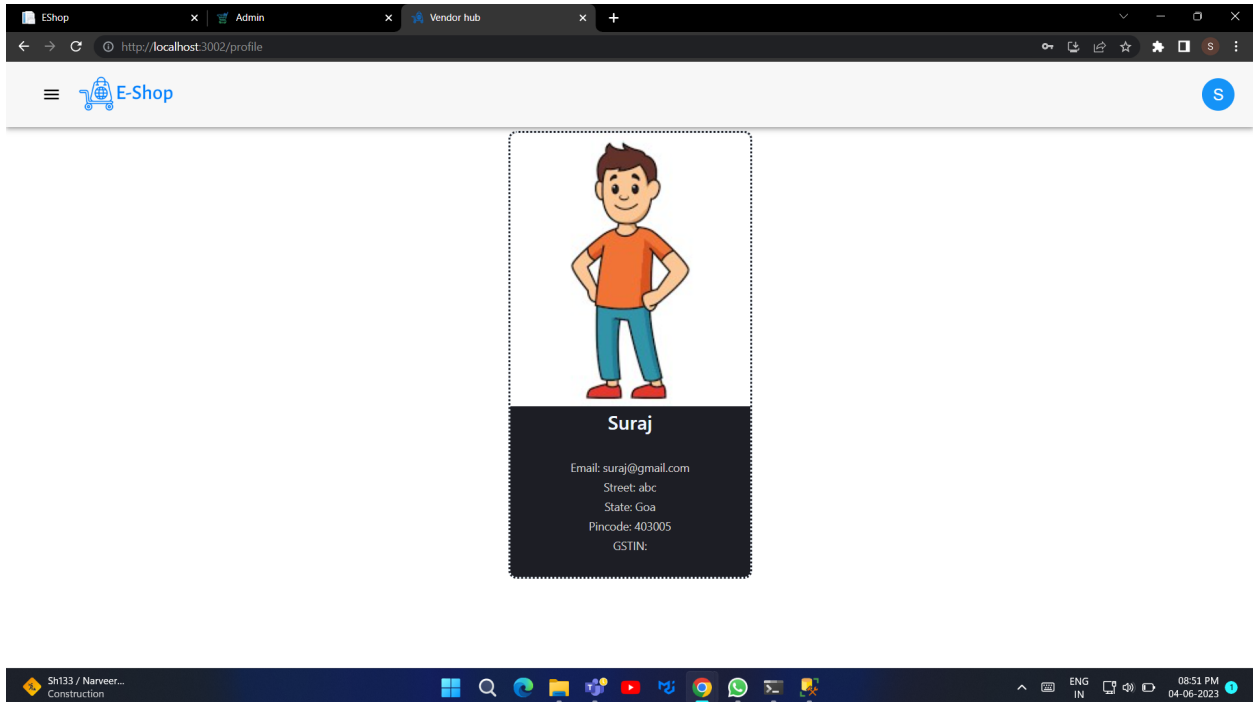


Dashboard



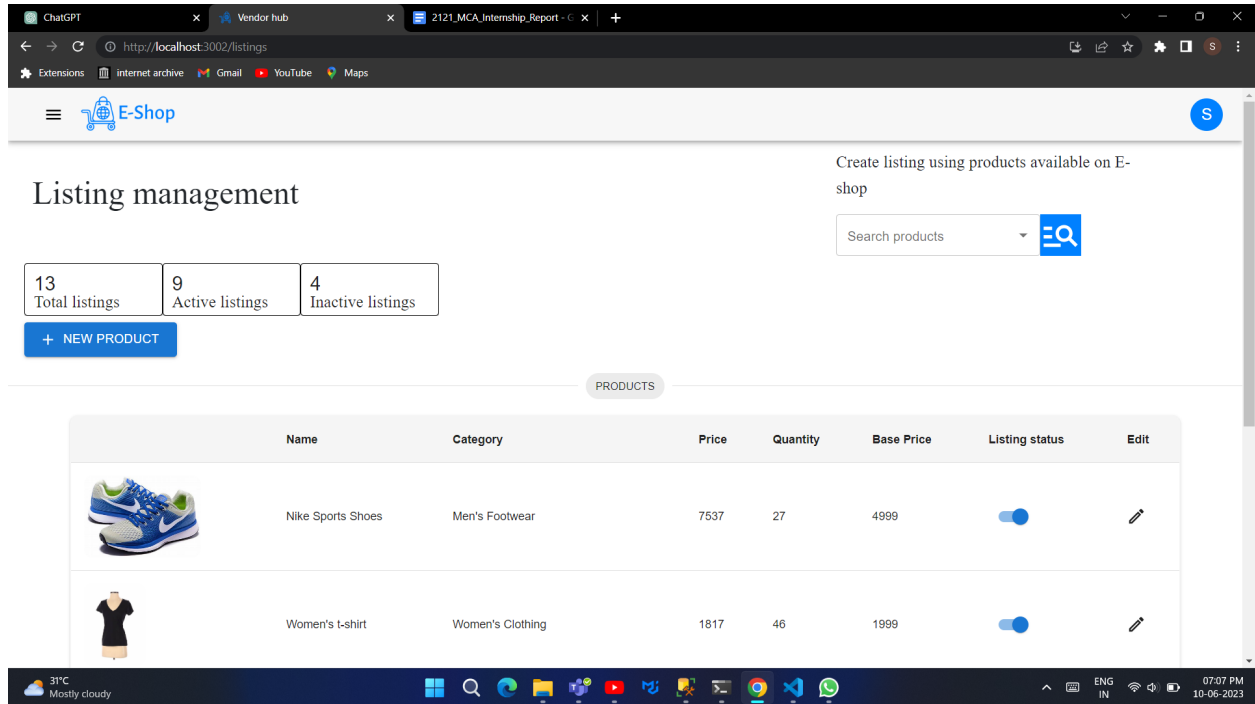
The screenshot shows the E-Shop Dashboard in a web browser. The browser's address bar displays `http://localhost:3002`. The dashboard header includes the E-Shop logo and a user profile icon labeled 'S'. A light blue notification banner at the top states: "Please complete your profile by filling up these details." The main content area features two update forms: "Update GSTIN number" with a text input field and a "SUBMIT" button, and "Update Delivery pin code" with a text input field and a "SUBMIT" button. Below these forms, a section titled "4 items are running low on stock!" lists "Samsung" with a quantity of 6 and "Xiaomi" with a quantity of 1, each accompanied by a small product image. The Windows taskbar at the bottom shows the system clock at 07:05 PM on 10-06-2023.

Profile page



The screenshot shows the E-Shop Profile page in a web browser. The browser's address bar displays `http://localhost:3002/profile`. The page header is identical to the dashboard. The profile section features a cartoon illustration of a man with brown hair, wearing an orange t-shirt and blue pants, standing with his hands on his hips. Below the image, the name "Suraj" is displayed in white text on a dark background. Underneath the name, the following contact information is listed in white text: "Email: suraj@gmail.com", "Street: abc", "State: Goa", "Pincode: 403005", and "GSTIN:". The Windows taskbar at the bottom shows the system clock at 08:51 PM on 04-06-2023.

Products listings



The screenshot shows the 'Listing management' page of an application. At the top, there's a navigation bar with the 'E-Shop' logo and a user profile icon. Below the navigation bar, the page title 'Listing management' is displayed. To the right, there's a search bar with the placeholder text 'Search products' and a magnifying glass icon. Below the search bar, there are three summary boxes: '13 Total listings', '9 Active listings', and '4 Inactive listings'. A blue button labeled '+ NEW PRODUCT' is positioned below these boxes. The main content area is titled 'PRODUCTS' and contains a table with the following columns: Name, Category, Price, Quantity, Base Price, Listing status, and Edit. The table lists two items: 'Nike Sports Shoes' (Men's Footwear) and 'Women's T-shirt' (Women's Clothing). The Nike Sports Shoes listing shows a price of 7537, a quantity of 27, and a base price of 4999. The Women's T-shirt listing shows a price of 1817, a quantity of 46, and a base price of 1999. Both listings have a toggle switch for 'Listing status' and an 'Edit' button. The bottom of the page shows a Windows taskbar with the date and time '07:07 PM 10-06-2023'.

Listing management





Create listing using products available on E-shop

Search products

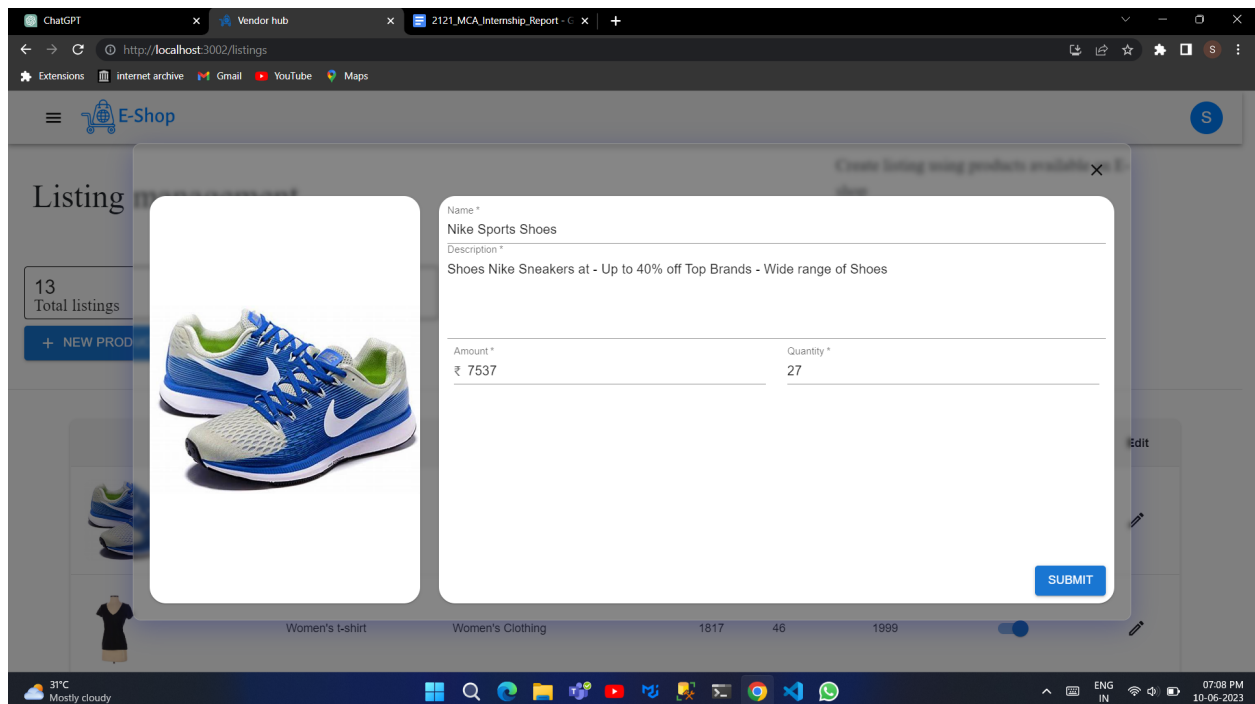
13 Total listings 9 Active listings 4 Inactive listings

+ NEW PRODUCT

PRODUCTS

Name	Category	Price	Quantity	Base Price	Listing status	Edit	
	Nike Sports Shoes	Men's Footwear	7537	27	4999	<input checked="" type="checkbox"/>	
	Women's T-shirt	Women's Clothing	1817	46	1999	<input checked="" type="checkbox"/>	

Products details edit page



The screenshot shows the 'Products details edit page' of the application. A modal window is open, displaying the details for the 'Nike Sports Shoes' listing. The modal has a close button (X) in the top right corner. On the left side of the modal, there is a large image of the Nike Sports Shoes. On the right side, there are input fields for 'Name *' (filled with 'Nike Sports Shoes'), 'Description *' (filled with 'Shoes Nike Sneakers at - Up to 40% off Top Brands - Wide range of Shoes'), 'Amount *' (filled with '₹ 7537'), and 'Quantity *' (filled with '27'). A blue 'SUBMIT' button is located at the bottom right of the modal. The background of the page is dimmed, showing the 'Listing management' page with the 'Listing' title and the '+ NEW PRODUCT' button. The bottom of the page shows a Windows taskbar with the date and time '07:08 PM 10-06-2023'.

Listing

13 Total listings

+ NEW PRODUCT

Products details edit page

Name *
Nike Sports Shoes

Description *
Shoes Nike Sneakers at - Up to 40% off Top Brands - Wide range of Shoes

Amount *
₹ 7537

Quantity *
27

SUBMIT

Products search

ChatGPT Vendor hub 2121_MCA_Internship_Report - G x +

http://localhost:3002/listings

Extensions internet archive Gmail YouTube Maps

E-Shop S

Listing management







13
Total listings

9
Active listings

4
Inactive listings

+ NEW PRODUCT


PRODUCTS

	Name	Category	Price	Quantity		Status	Edit
	Nike Sports Shoes	Men's Footwear	7537	27	4999		
	Women's T-shirt	Women's Clothing	1817	46	1999		


Create listing using products available on E-shop

Search products


shoe



Kids Footwear

 SparX Shoe

Men's Footwear

 Nike Sports Shoes

31°C Mostly cloudy


07:09 PM 10-06-2023

Error page

ChatGPT Vendor hub 2121_MCA_Internship_Report - G x +

http://localhost:3002/?token=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJbnZlbnRvcnBcGjZlZlZW4iLCJqdGkiOiI2MWJkOTA2OS01Y2lmLTRhMmQ1ODI3NjE1IiwiaWF0IjoiMTY1OTU0MjE1In0

Extensions internet archive Gmail YouTube Maps



You are not a Vendor

Kindly Register or Login as a Vendor
If you think this is a mistake, Kindly contact the Admin

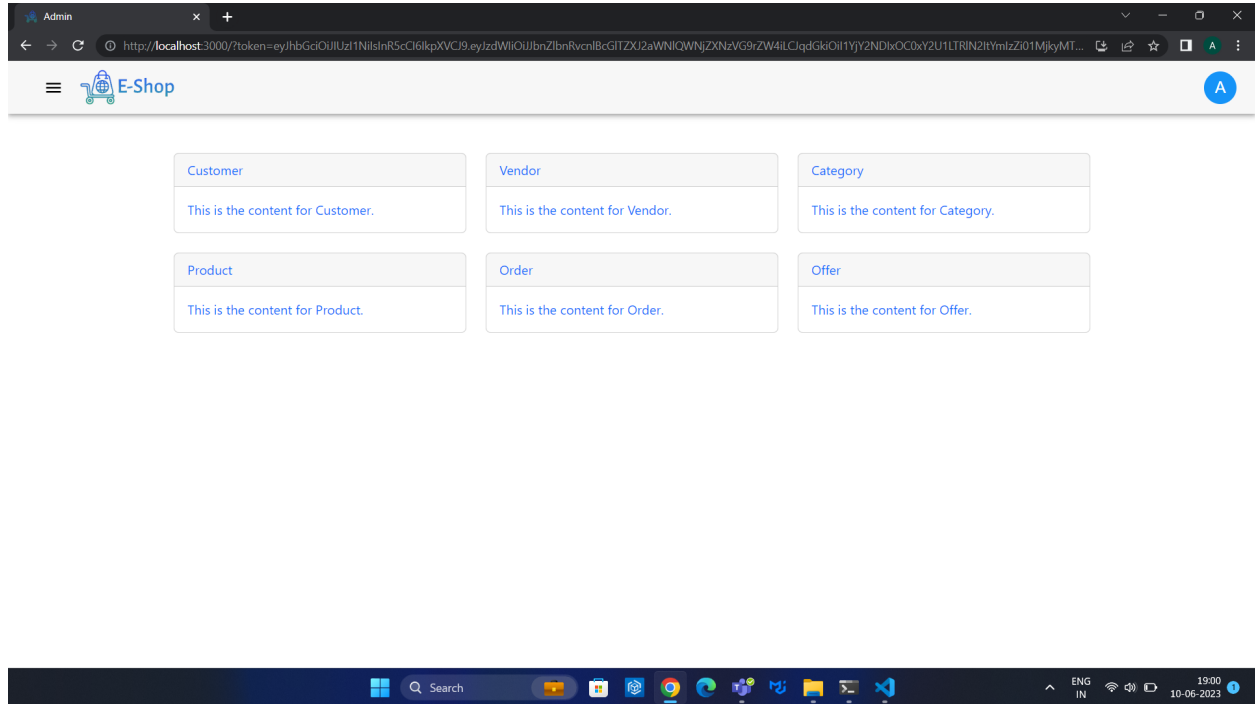
[LOGIN](#)

31°C Mostly cloudy

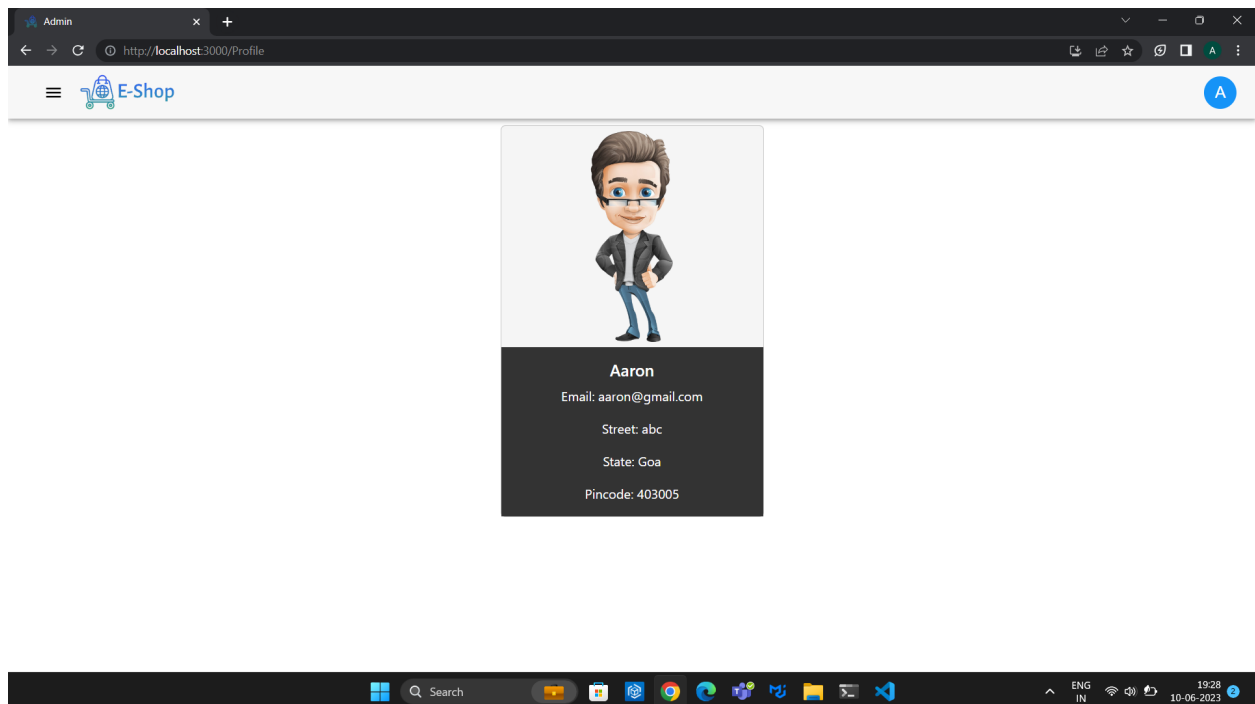
07:10 PM 10-06-2023

Admin app

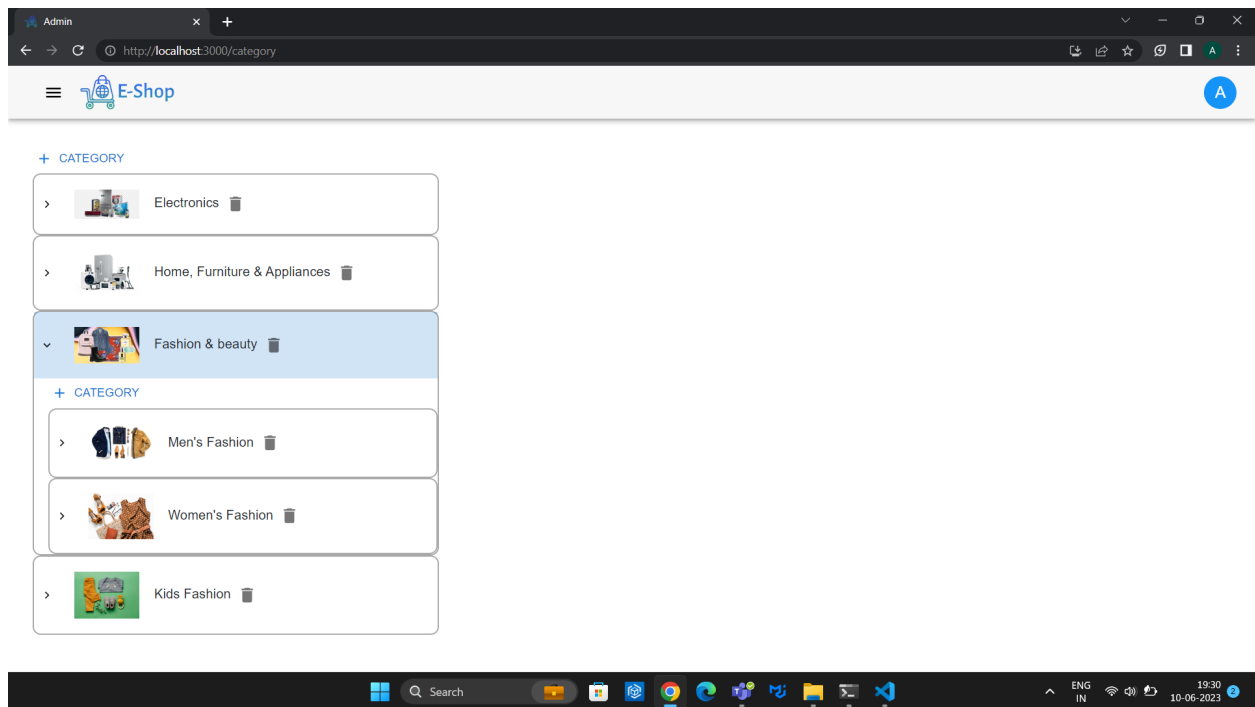
Dashboard



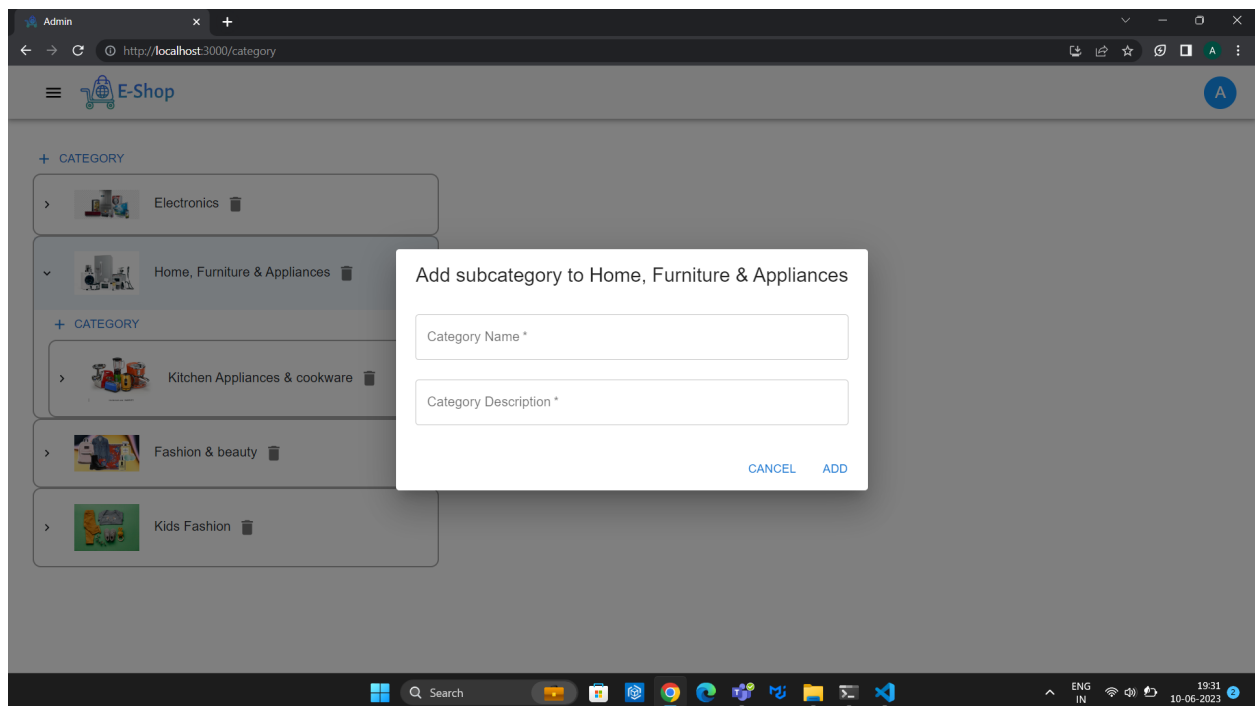
Profile page



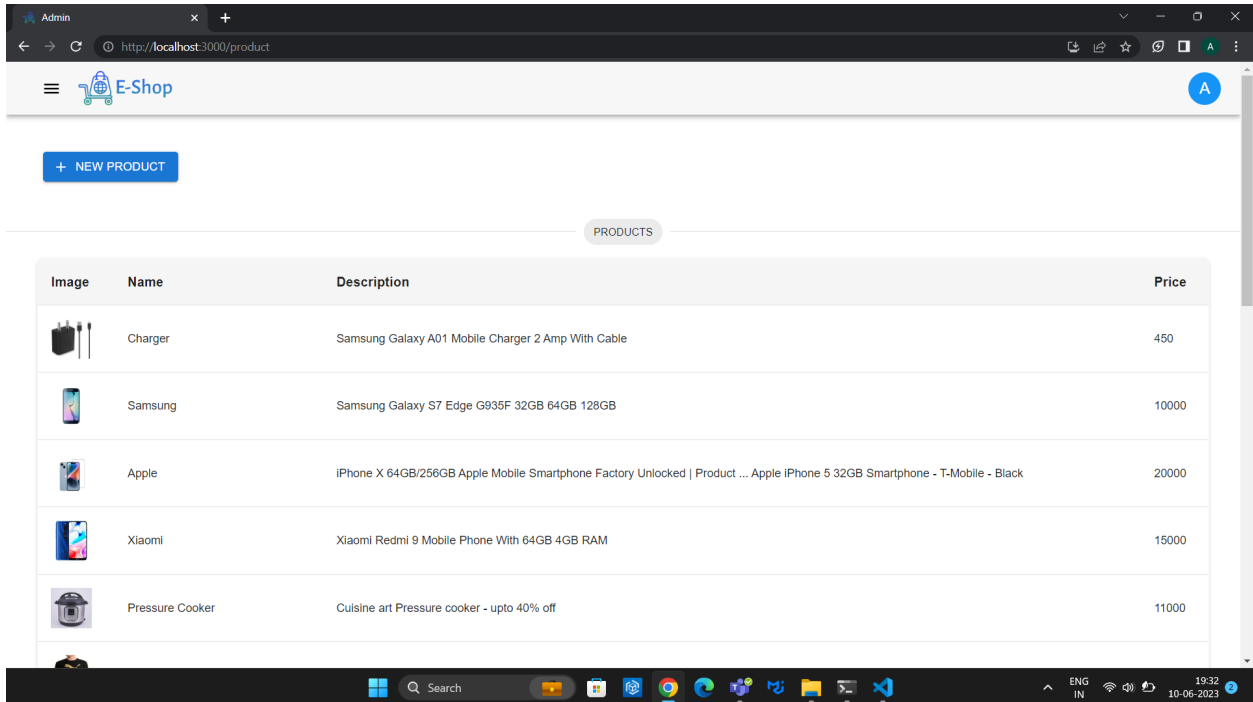
Category management page








Adding a new category



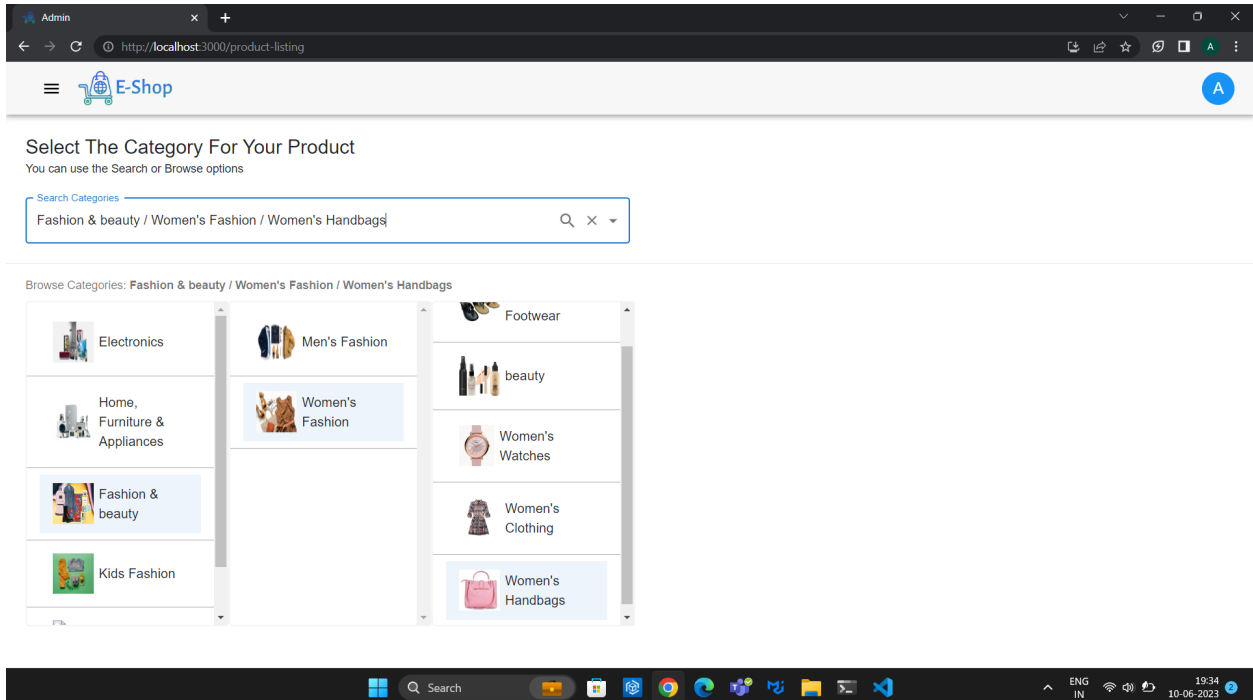
Products listed



The screenshot shows the E-Shop Admin interface. At the top, there's a navigation bar with the E-Shop logo and a user profile icon. Below the navigation bar, there's a button labeled "+ NEW PRODUCT". The main content area is titled "PRODUCTS" and displays a table of products.

Image	Name	Description	Price
	Charger	Samsung Galaxy A01 Mobile Charger 2 Amp With Cable	450
	Samsung	Samsung Galaxy S7 Edge G935F 32GB 64GB 128GB	10000
	Apple	iPhone X 64GB/256GB Apple Mobile Smartphone Factory Unlocked Product ... Apple iPhone 5 32GB Smartphone - T-Mobile - Black	20000
	Xiaomi	Xiaomi Redmi 9 Mobile Phone With 64GB 4GB RAM	15000
	Pressure Cooker	Cuisine art Pressure cooker - upto 40% off	11000

Selecting a category



The screenshot shows the E-Shop Admin interface for selecting a category. At the top, there's a navigation bar with the E-Shop logo and a user profile icon. Below the navigation bar, there's a section titled "Select The Category For Your Product" with a subtitle "You can use the Search or Browse options".

Search Categories

Fashion & beauty / Women's Fashion / Women's Handbags

Browse Categories: Fashion & beauty / Women's Fashion / Women's Handbags

- Electronics
- Home, Furniture & Appliances
- Fashion & beauty
- Kids Fashion
- Men's Fashion
- Women's Fashion
- Footwear
- beauty
- Women's Watches
- Women's Clothing
- Women's Handbags

Concepts learnt

During my internship at Afour Technologies, I had the opportunity to learn and explore various concepts and technologies in the realm of web development. The following is a list of key concepts that I gained proficiency in:

1. ASP.NET MVC:

- Routing: I learned how to configure routing in ASP.NET MVC to define the URL structure and map it to appropriate controller actions.
- Asynchronous Programming: I worked with `async` and `await` keywords to handle asynchronous operations, improving the responsiveness and performance of the application.
- Stored Procedures in .NET: I leveraged stored procedures for executing database operations efficiently and implemented mechanisms to handle session and local storage.
- Models, Views, and Controllers: I gained a deep understanding of the MVC architectural pattern and how to design models, views, and controllers to achieve separation of concerns.
- Data Transfer Objects (DTOs): I learned the importance of using DTOs to transfer data between layers and improve performance by reducing unnecessary data retrieval.
- HTTP Methods: I utilized HTTP methods such as GET, POST, PUT, and DELETE to implement RESTful APIs and handle different types of client requests.
- Database Configurations: I worked with various database configurations and learned how to establish connections, handle migrations, and perform database operations using Entity Framework.
- BCrypt Implementation: I implemented BCrypt for password hashing and securely storing user credentials.
- Services: I gained knowledge of service-oriented architecture and implemented services to encapsulate business logic and promote code reusability.

2. ASP.NET Blazor:

- Routing: I learned how to configure routing in Blazor applications to navigate between different components and pages.
- Transitioning from `.cshtml` to `.razor` syntax: I successfully converted existing UIs from `.cshtml` to `.razor` syntax, leveraging the power of Blazor components.
- `AddServerSideBlazor`: I utilized the `AddServerSideBlazor` method to enable server-side Blazor rendering and achieve real-time user interactions.
- Cross-Origin Resource Sharing (CORS): I learned how to enable CORS in Blazor applications to allow cross-origin resource sharing.

3. React:

- Router: I gained expertise in using React Router to handle client-side routing and enable navigation within the application.
- Hooks: I utilized various React hooks such as `useContext`, `useState`, `useEffect`, `useRef`, and understood their role in managing state and performing side effects.

- Axios: I worked with Axios to make HTTP requests, including GET, PUT, and POST, to interact with backend APIs.
- React-Bootstrap and Material UI: I used React-Bootstrap and Material UI libraries to create visually appealing and responsive user interfaces.
- Keys and Lists: I learned the importance of using unique keys when rendering lists in React to optimize performance and facilitate proper rendering.
- Forms: I gained experience in building and handling forms in React, including form validation and submission.

4. ASP.NET Web API:

- JWT Authentication: I implemented JWT (JSON Web Token) authentication in ASP.NET Web API to secure the API endpoints and authorize user access.
- CRUD API: I designed and developed CRUD (Create, Read, Update, Delete) APIs to perform database operations through the Web API.
- Entity Framework: I worked with Entity Framework to interact with the database, perform database migrations, and execute queries efficiently.
- CORS: I understood and implemented Cross-Origin Resource Sharing (CORS) in ASP.NET Web API to allow access from different domains.

Additionally, I utilized various .NET packages throughout the development process, including `Microsoft.AspNetCore.Components.Web`, `System.Net.Http`, `BootstrapIcons.AspNetCore`, `System.IdentityModel.Tokens.Jwt`, `System.Security.Permissions`, `Microsoft.JSInterop`, `Razorpay`, `SendGrid`, `SendGrid.SmtpApi`, `Swashbuckle.AspNetCore`, `Microsoft.AspNet.WebApi.Client`, `Microsoft.AspNet.WebApi.Core`, `Microsoft.EntityFrameworkCore`, `Microsoft.EntityFrameworkCore.SqlServer`, `Microsoft.EntityFrameworkCore.Tools`, `Microsoft.AspNetCore.Authentication.JwtBearer`, `BCrypt.Net-Next`, and `Newtonsoft.Json`.

Through hands-on experience and practical application of these concepts and technologies, I expanded my knowledge and skills in full-stack web development, enabling me to contribute effectively to the Ecommerce project and furthering my growth as a software developer.

Future Enhancement

- Microservices Architecture
- Cloud Integration
 - Using SQL server on Azure or any other cloud providers
 - Hosting
 - CDN
- UI Design
- Integration of Social Login - Google/facebook
- Cash on Delivery (COD) as a payment option
- Refund and Exchange Management
- Review and Rating System
- SMS Notifications
- Search and Navigation Enhancements
- Recommendation Engine
- Advanced Analytics and Reporting for vendor and admin

Conclusions

The internship project at AFour Technologies was a valuable learning experience that allowed me to gain mastery in various technologies and contribute to the development of an e-commerce website. Over the duration of the internship, I held the role of an Internship Trainee - Fullstack Developer and collaborated with a team consisting of two other members, Suraj Pandey and Aaron Desousa. Our primary objective was to become proficient in .NET technology, Rest API's, React, and SQL databases.

Throughout the project, I actively participated in both frontend and backend development tasks. On the backend, I worked on web API development using .NET and implemented features such as JWT token authentication for secure user access, CRUD APIs for database manipulation, and integration of payment functionality using the Razor Pay payment gateway. Additionally, I utilized the SendGrid SMTP API for sending invoices and bills to customers via email.

In terms of frontend development, I collaborated closely with my team to develop an authentication application using .NET for the backend and Razor Pages for the frontend. The main application was built using the Blazor technology, which provided a seamless and interactive single-page application experience. Furthermore, I successfully integrated the frontend developed in React with the backend implemented in .NET, allowing for a cohesive user interface and efficient communication between the two.

Throughout the project, I embraced a peer learning approach with my team members. While I focused on teaching them .NET, they shared their knowledge of React, creating a mutually beneficial learning environment. This initiative allowed us to expand our skills and gain insights into both technologies, saving learning time and enhancing our overall knowledge and proficiency.

In summary, the internship project at AFour Technologies provided me with the opportunity to gain mastery in .NET technology, Rest API's, React, and SQL databases. I successfully contributed to the development of an e-commerce website by actively participating in both frontend and backend tasks. The utilization of various tools and technologies, such as .NET REST API, .NET MVC Razor, .NET Blazor, React, SQL Database, JWT Token, Razorpay Payment Gateway, SendGrid API, Bootstrap, Material UI, C#, Entity Framework, GitHub, and more, facilitated the successful implementation of the project.

The experience gained during this internship has equipped me with valuable skills and knowledge that I intend to utilize in future endeavors. I aspire to explore mobile development using .NET and continue expanding my expertise in fullstack web development. Overall, the internship project has had a significant impact on my career path, reinforcing my passion for technology and setting a strong foundation for future growth and success.

Internship Timeline

January 2023:

- Software installation: Visual Studio 2022, SQL Server 2019 Developer Edition, Visual Studio Code, .NET 6, Postman API
- Learned basic concepts from stage 1 learning material provided by AFour Technologies

February 2023:

- Learned various technologies and concepts related to .NET, MVC, React, REST APIs, authentication, authorization, databases, etc.
- Worked on basic application development using .NET, MVC, Razor, and React
- Explored frontend and backend technologies, tools, and frameworks
- Conducted research and experiments on using different technologies together, such as React with .NET MVC
- Implemented login and registration functionality, user authentication, and authorization using JWT tokens
- Worked on database design and management using Entity Framework and SQL Server

March 2023:

- Researched and implemented the usage of identity API in Visual Studio Code
- Conducted project sync-up meetings and worked on architecture and database design
- Integrated web API with frontend technologies
- Developed landing page for authenticated users
- Implemented JWT role-based authentication for different user roles (Admin/Vendor/User)
- Worked on various UI improvements, including dark mode theme, state management, and database models
- Collaborated with team members and participated in peer learning activities to enhance knowledge and skills

April 2023:

- Conducted research and prepared presentations on architecture design, database design, and site map
- Separated the authentication application and created the main UI using Blazor
- Integrated login/registration application with the Blazor application
- Explored and learned the basics of React and its integration with Blazor
- Implemented various features such as product listing, cart management, wishlist, and user profile
- Explored and implemented routing in Blazor
- Worked on integrating payment gateway (Razorpay) into the checkout page
- Researched and implemented the usage of SendGrid SMTP API for sending order invoices via email
- Conducted research on integrating WhatsApp cloud API for sending WhatsApp messages after payment

May 2023:

- Integrated payment gateway (Razorpay) into the checkout page and implemented authorized payment
- Explored Pabbly Connect and webhooks for automating the sending of order invoices
- Implemented sending order invoices automatically using SendGrid SMTP API
- Worked on UI improvements, coupon code management, order tracking, and My Orders page
- Resolved GitHub merge conflicts and managed code versioning
- Conducted research and experiments on advanced email functionalities and invoice formatting
- Improved UI elements, product search functionality, and order delivery status display

June 2023 (Present):

- Worked on UI enhancements, including logo and CSS styling
- Implemented changing stock quantity after an order is placed

May:

Week1: creating new vendor and updating his data dynamically

Week2: Authenticating user based on role before accessing the application, worked on adding and listing categories

Week3: Implementation of pagination, Category listing view updated.

Week4: Prepared ppt, worked on UI of product details page, Logo, learned nested routing

My experiences of internship

My internship at AFour Technologies has been an incredibly enriching and transformative experience. Throughout the duration of the internship, I had the opportunity to work on a challenging project that focused on developing an e-commerce website using various technologies. Reflecting on this experience, I would like to share some of the key reflections and experiences that have shaped my professional growth:

1. **Technical Skill Development:** The internship provided me with an excellent platform to enhance my technical skills. I gained hands-on experience in .NET technology, Rest API's, React, and SQL databases. Working on web API development using .NET allowed me to deepen my understanding of backend development, while React empowered me to create dynamic and interactive user interfaces. Additionally, working with SQL databases enhanced my knowledge of data management and retrieval. These technical skills will undoubtedly prove invaluable as I progress in my career.
2. **Collaboration and Teamwork:** Being part of a team consisting of Suraj Pandey, Aaron Desousa, and myself was a rewarding experience. We collaborated closely, shared ideas, and supported each other throughout the project. This collaborative environment fostered a strong sense of teamwork and helped us overcome challenges together. I realized the importance of effective communication and collaboration in achieving project goals and delivering high-quality results.
3. **Peer Learning and Knowledge Exchange:** One of the highlights of the internship was the peer learning initiative we implemented within the team. Teaching .NET to my teammates and learning React from them not only accelerated our learning but also fostered a spirit of mutual support and growth. This experience reinforced the idea that knowledge sharing and collaboration are essential for personal and professional development.
4. **Time Management and Task Prioritization:** Working on a project with specific timelines and deliverables required effective time management and task prioritization. I learned to allocate my time efficiently, ensuring that crucial tasks were completed within the given timeframe. This experience enhanced my ability to work under pressure, meet deadlines, and handle multiple responsibilities simultaneously.
5. **Professionalism and Adaptability:** The internship exposed me to a professional work environment where I had to adhere to deadlines, follow coding standards, and maintain high-quality standards in my deliverables. I learned to adapt to the company's processes and workflows, ensuring seamless integration within the team. This experience honed my professionalism and adaptability, qualities that are essential in any professional setting.

6. **Learning from Challenges:** Throughout the internship, I encountered various challenges that tested my problem-solving abilities. From debugging complex issues to resolving conflicts in code integration, these challenges provided valuable learning opportunities. They taught me the importance of perseverance, critical thinking, and seeking guidance when needed. Overcoming these challenges instilled in me a sense of resilience and strengthened my ability to overcome obstacles in future endeavors.
7. **Future Goals and Aspirations:** This internship experience has greatly influenced my future goals and aspirations. It has reinforced my passion for fullstack development and solidified my desire to pursue a career in this field. I aim to further enhance my skills in mobile development using .NET and continue exploring new technologies to stay at the forefront of the industry. This internship has provided a strong foundation and roadmap for my professional growth.

In conclusion, my internship at AFour Technologies has been an incredible journey of learning, collaboration, and personal growth. It has allowed me to develop technical expertise, hone essential professional skills, and gain valuable insights into the world of software development. The experiences and reflections gained during this internship will undoubtedly shape my future career endeavors and inspire me to continue striving for excellence in the field of fullstack development.

References

.NET

ASP .NET Core :

https://learn.microsoft.com/en-us/aspnet/core/?WT.mc_id=dotnet-35129-website&view=aspnetcore-6.0

blazor:

https://learn.microsoft.com/en-us/aspnet/core/?WT.mc_id=dotnet-35129-website&view=aspnetcore-6.0

mvc:

https://learn.microsoft.com/en-us/aspnet/core/mvc/overview?WT.mc_id=dotnet-35129-website&view=aspnetcore-6.0

web API :

https://learn.microsoft.com/en-us/aspnet/core/web-api/?WT.mc_id=dotnet-35129-website&view=aspnetcore-6.0

Razor:

https://learn.microsoft.com/en-us/aspnet/core/razor-pages/?WT.mc_id=dotnet-35129-website&view=aspnetcore-6.0&tabs=visual-studio

Others :

Razor pay : <https://razorpay.com/docs/>

Material UI : <https://mui.com/>

sendGrid SMTP API: <https://app.sendgrid.com/guide/integrate>

React Documentations : <https://legacy.reactjs.org/docs/getting-started.html>