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INFORMATION TECHNOLOGY
(CDAC-ACTS)
BHUJBAL KNOWLEDGE CITY, NASHIK.**

**Documentation On
“Om Traders Home Appliances Management System”
PG-DAC SEP 2023**

Submitted By:

Group No: 08

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Project Guide**

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1. INTRODUCTION

Introduction:

The Om Traders Home Appliances Management System is a comprehensive software solution designed to streamline the operations of a home appliances retail business. This project aims to provide an efficient platform for managing inventory, sales, purchases, customer relationships, and employee activities. The system is intended to enhance productivity, improve customer service, and facilitate better decision-making processes.

Problem Statement:

Many home appliances retail businesses struggle with inefficient management systems, leading to challenges in inventory tracking, sales processing, customer relationship management, and employee oversight. Manual processes, disparate systems, and lack of real-time data visibility often result in operational inefficiencies, decreased productivity, and poor customer service.

Aims and Objective:

The aim of the Om Traders Home Appliances Management System project is to develop a comprehensive software solution that addresses the challenges faced by home appliances retail businesses. The primary objectives include:

- **Streamlining Operations:** Designing a user-friendly interface and implementing functionalities to streamline inventory management, sales processing, and purchase tracking.
- **Enhancing Customer Relationships:** Developing features for managing customer interactions, tracking preferences, and providing personalized services to improve customer satisfaction and loyalty.
- **Improving Decision-Making:** Providing reporting and analytics capabilities to generate insights into business performance, identify trends, and make data-driven decisions.
- **Increasing Efficiency:** Automating repetitive tasks, optimizing workflows, and integrating systems to increase operational efficiency and reduce manual errors.
- **Ensuring Security and Compliance:** Implementing robust security measures to protect sensitive data and ensure compliance with regulations such as GDPR and PCI DSS.
- **Empowering Employees:** Providing tools for managing employee schedules, tracking performance, and facilitating communication to empower employees and improve teamwork.

By achieving these objectives, the Om Traders Home Appliances Management System aims to transform the way home appliances retail businesses operate, enabling them to thrive in a competitive market landscape.

2. OVERALL DESCRIPTION

Proposed Methodology:

At its core, the system offers functionalities to streamline inventory management processes. It enables users to track stock levels, monitor product details, manage supplier information, and set reorder points to ensure optimal inventory levels. By providing real-time visibility into inventory status, the system helps businesses avoid stock outs and overstocking, thereby optimizing their supply chain operations.

In addition to inventory management, the system facilitates efficient sales processing. It allows users to record sales transactions, generate invoices, and manage customer orders seamlessly. With features for processing payments, applying discounts, and tracking sales history, the system enables

businesses to enhance their sales processes and provide superior customer service.

Furthermore, the system includes modules for purchase management, enabling businesses to streamline procurement processes and manage supplier relationships effectively. Users can record purchases, track shipments, and update stock levels efficiently, thereby ensuring timely replenishment of inventory and reducing procurement-related delays.

The Om Traders Home Appliances Management System also incorporates customer relationship management (CRM) functionalities to help businesses build and maintain strong relationships with their customers. It enables users to maintain customer records, track interactions, and manage inquiries and complaints effectively. With features for sending promotional offers, managing loyalty programs, and analyzing customer data, the system empowers businesses to deliver personalized services and drive customer satisfaction and loyalty.

Overall, the Om Traders Home Appliances Management System is designed to empower home appliances retail businesses with the tools and insights they need to streamline their operations, enhance customer satisfaction, and achieve their business objectives effectively.

Design and Implementation Constraints:

- **Web Technologies:** The application is constrained to use ReactJS, Axios, and CSS as the main web technologies. Any additional technologies must be compatible with these frameworks and adhere to their guidelines.
- **Communication Protocol:** HTTP protocol is mandated as the communication protocol for client server interactions. This constraint limits the system's compatibility with alternative protocols and requires all communication to adhere to HTTP standards.
- **Deployment Protocol:** FTP (File Transfer Protocol) is designated for uploading the web application to the live domain. The system is constrained to utilize FTP for deployment purposes, ensuring compatibility with the hosting environment. Access to the application by clients is facilitated through the HTTP protocol.
- **Security Measures:** The web application must incorporate various types of validations to ensure security. This includes validation of user inputs, authentication mechanisms, and encryption techniques. SQL injection prevention measures must also be implemented to safeguard against potential vulnerabilities.
- **Internet Dependency:** As a web-based application, the Om Traders Home Appliances Management System is inherently reliant on internet connectivity. This constraint necessitates the establishment of a stable internet connection for both server side operations and client access.

3. REQUIREMENTS SPECIFICATION.

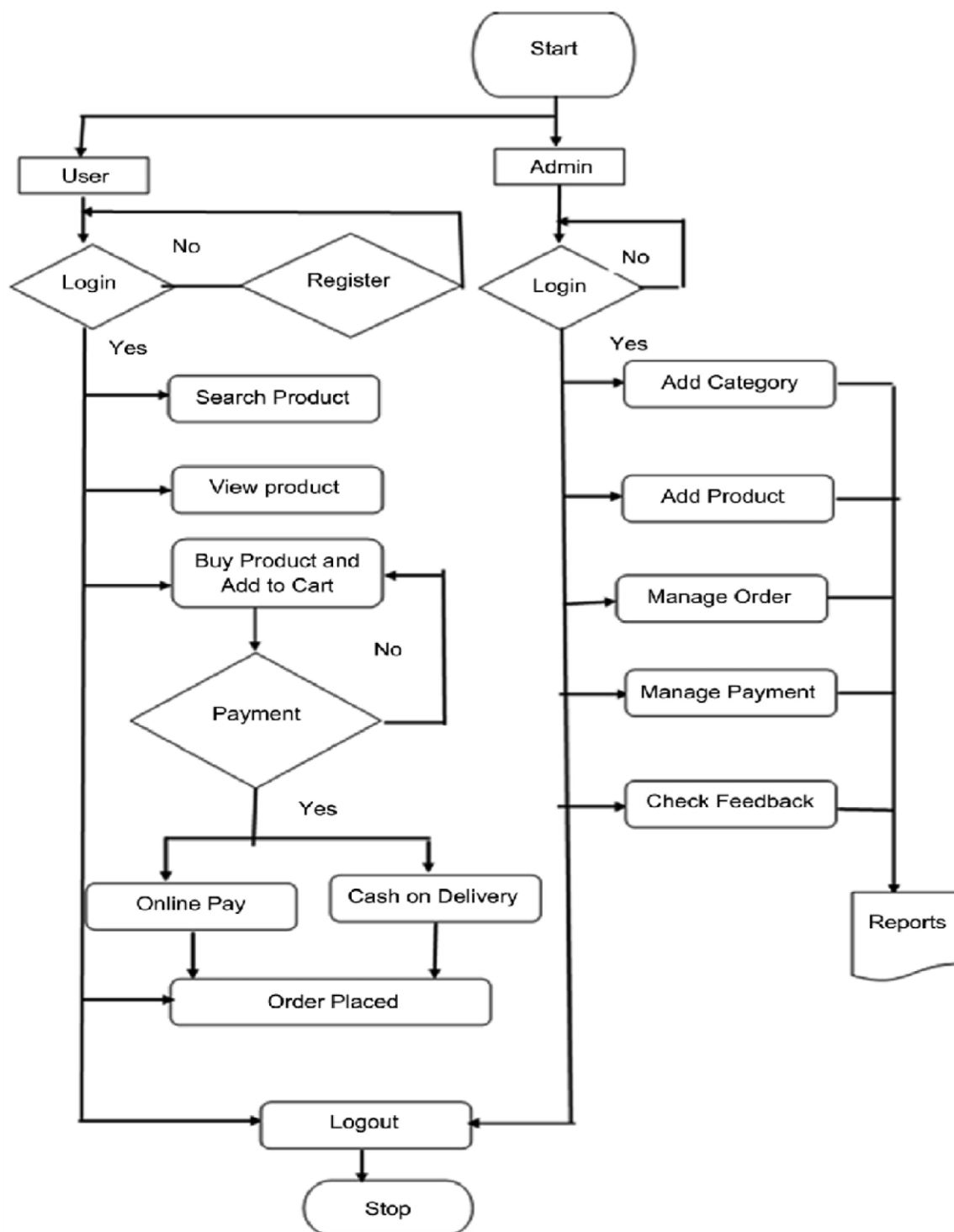
External Interface Requirements:

•	User Interface:	<ol style="list-style-type: none">1. The system shall provide a user-friendly interface implemented using ReactJS, Axios, and CSS technologies.2. The interface shall be intuitive, responsive, and accessible across different devices and screen sizes.
•	Communication Protocol:	<ol style="list-style-type: none">1. The system shall communicate with clients and servers using the HTTP protocol over the internet.2. HTTP methods such as GET, POST, PUT, and DELETE shall be utilized for data exchange between the client-side application and the server-side backend.
•	Deployment Protocol:	<ol style="list-style-type: none">1. The web application shall be deployed to the live domain using the FTP (File Transfer Protocol).2. Clients shall access the application via the HTTP protocol by entering the appropriate URL in a web browser.
•	Data Validation:	<ol style="list-style-type: none">1. The system shall incorporate various types of validations to ensure data integrity and security.2. Input fields shall be validated on the client-side using JavaScript to provide realtime feedback to users.3. Server side validation shall also be implemented to prevent SQL injections and other security vulnerabilities.
•	Authentication and Authorization:	<ol style="list-style-type: none">1. The system shall provide authentication mechanisms to verify the identity of users accessing the application.2. Authorization controls shall be implemented to restrict access to certain features or data based on user roles and permissions.
•	Integration Interfaces:	<ol style="list-style-type: none">1. The system may need to integrate with third-party systems such as payment gateways, ERP systems, or external APIs.2. Flexible APIs shall be designed to facilitate seamless integration with external systems, following industry standards and best practices.

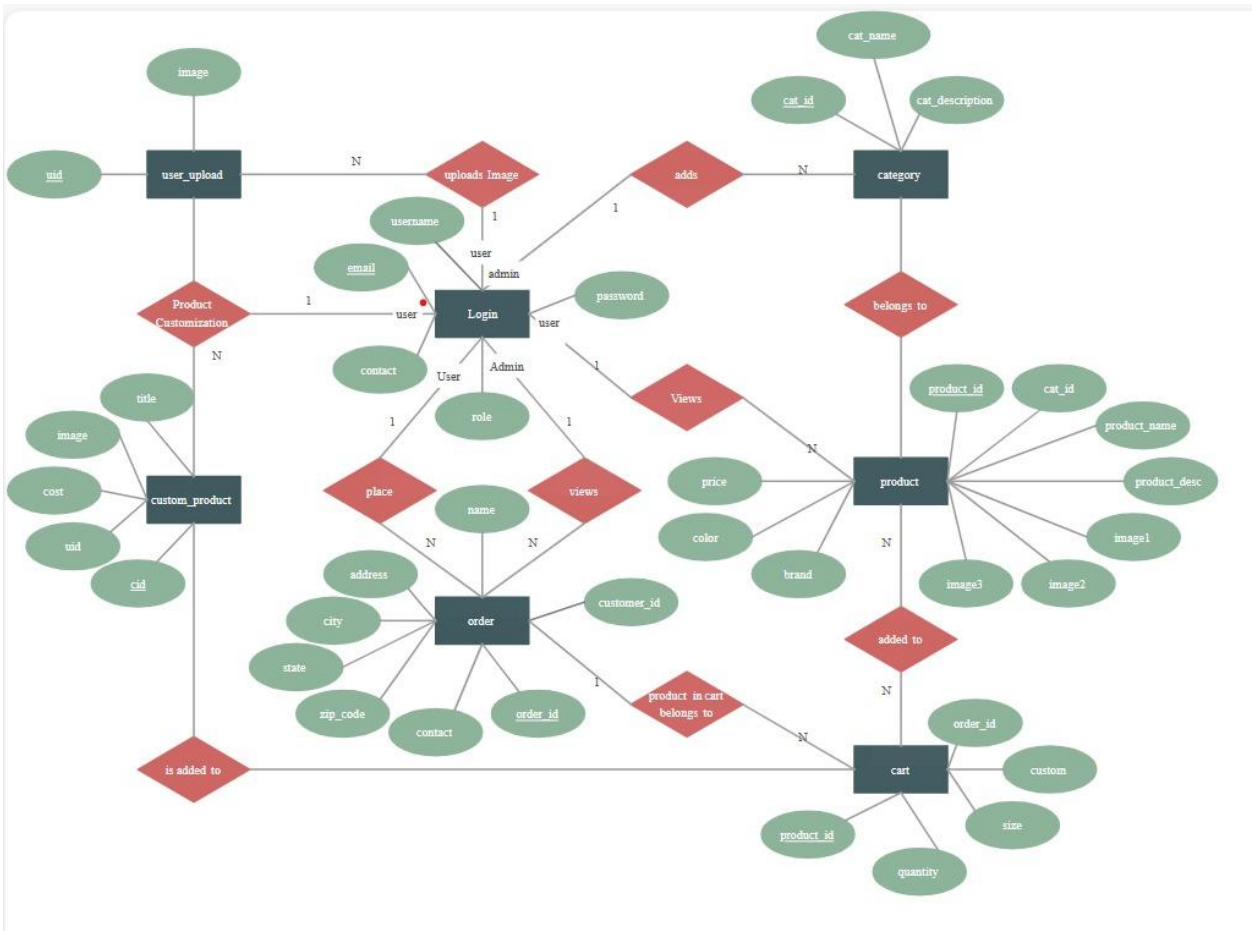
•	Browser Compatibility:	
		<ol style="list-style-type: none"><li data-bbox="610 239 1451 312">1. The web application shall be compatible with major web browsers such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.<li data-bbox="610 312 1451 386">2. Compatibility testing shall be conducted to ensure consistent performance and functionality across different browsers.
•	Localization and Internationalization:	
		<ol style="list-style-type: none"><li data-bbox="610 438 1451 512">1. The system may need to support multiple languages, currencies, and regional preferences to accommodate users from diverse backgrounds.<li data-bbox="610 512 1451 585">2. Localization features shall be implemented to allow users to customize language settings and display formats according to their preferences.
•	Error Handling and Reporting:	
		<ol style="list-style-type: none"><li data-bbox="610 638 1451 711">1. The system shall provide informative error messages and notifications to users in case of invalid inputs, system errors, or other issues.<li data-bbox="610 711 1451 789">2. Error logs and reports shall be generated to track and analyze system errors for troubleshooting and debugging purposes.

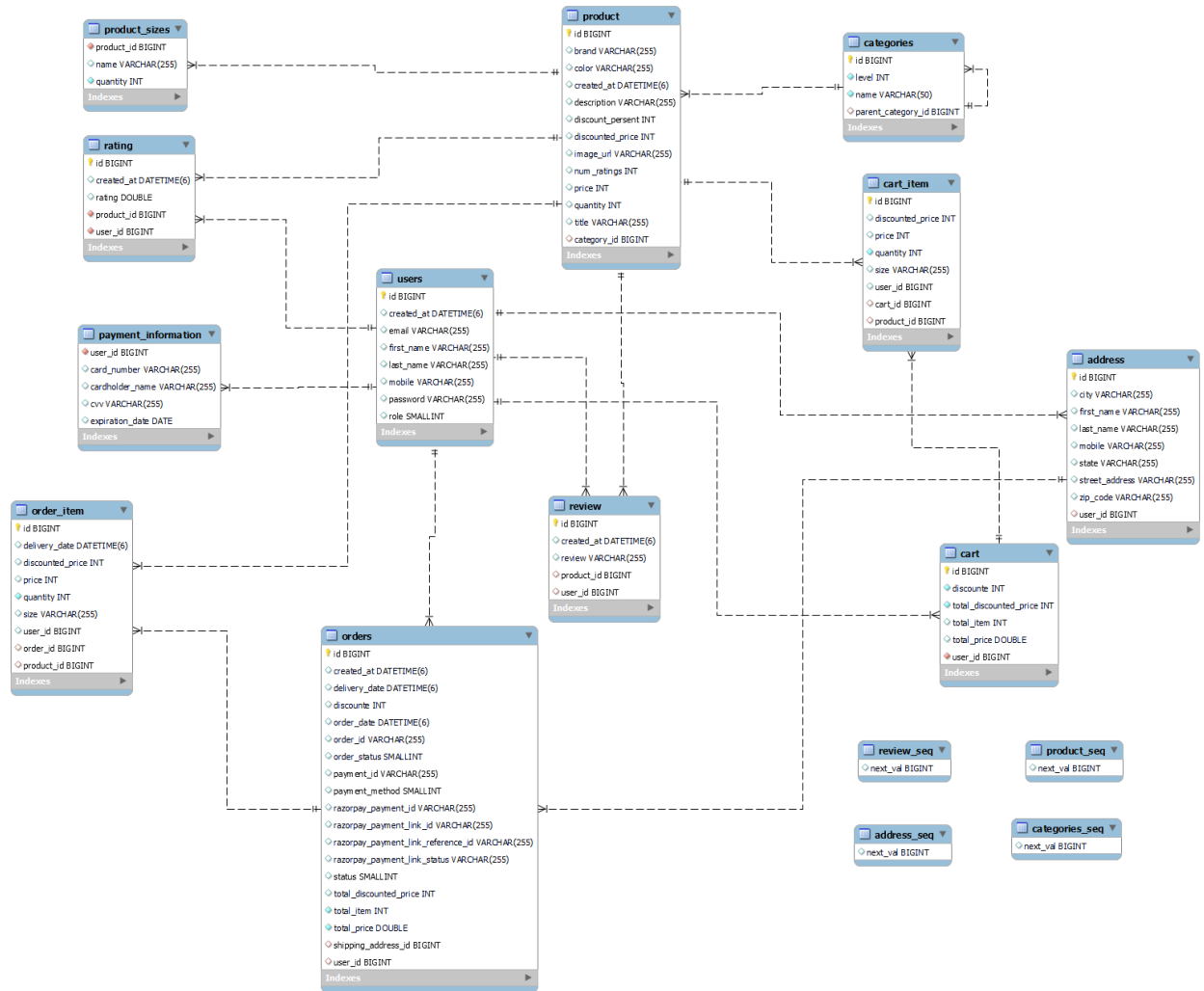
4. SYSTEM DIAGRAMS

Flow Chart

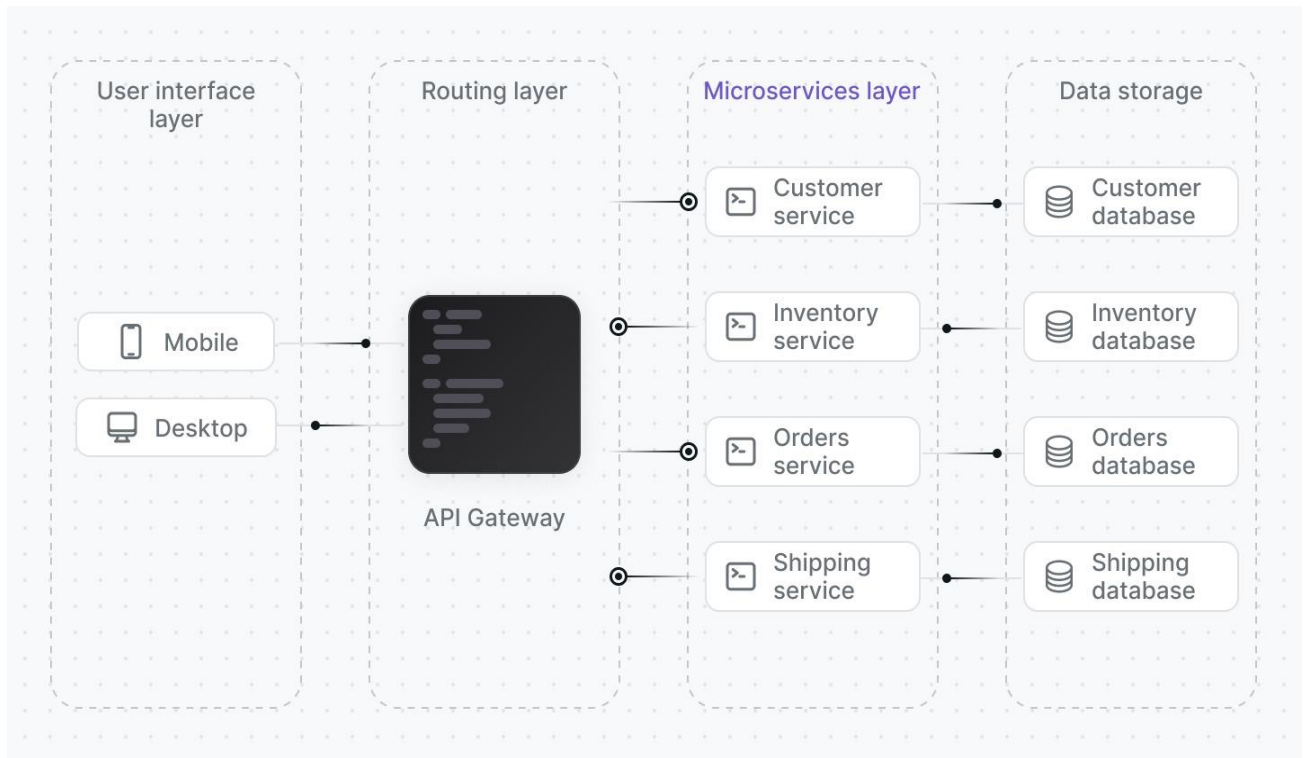


ER Diagram





Project Architecture Diagram



4. TABLE STRUCTURE

User Table:

[illegible]

Order Table:

	id	created_at	delivery_date	discounte	order_date	order_id	order_status	payment_id	payment_method	razorpay_payment_id	razorpay_payment_link_id	razorpay_payment
▶	1	2024-02-22 16:37:07.412316	view	2242	2024-02-22 16:37:07.412316	view	0	view	view	view	view	view
	2	2024-02-23 12:30:34.928814	view	3541	2024-02-23 12:30:34.928814	view	0	view	view	view	view	view
	3	2024-02-23 17:24:01.670189	view	800	2024-02-23 17:24:01.670189	view	0	view	view	view	view	view
	4	2024-02-23 18:03:06.695172	view	800	2024-02-23 18:03:06.695172	view	0	view	view	view	view	view
* view	5	2024-02-25 16:00:05.034114	view	178	2024-02-25 16:00:05.034114	view	0	view	view	view	view	view

[illegible]

Order Item Table:

[illegible]

	id	level	name	parent_category_id
▶	1	1	kitchenandhomehub	NULL
	2	2	kitchenappliances	1
	3	3	lunch_box	2
	4	3	food_storage	2
	5	1	electronics	NULL
	6	2	electronics	5
	7	3	microwave	6
	8	3	water_bottles	2
	9	2	homeappliances	1
	10	3	vacuum_cleaner	9
	11	3	bluetooth_speaker	9
	12	3	microwave	2
	13	3	induction	2
▶	14	3	sound_accessories	2
	15	3	mixer	2
	15	3	mixer	2
	16	3	gas_stove	2
	17	3	pressure_cooker	2
	18	3	electric_kettle	2
	19	3	ceiling_fan	2
	20	3	stand_fan	2
	21	3	sound_accessories	9
	52	3	iron	9
•	NULL	NULL	NULL	NULL

	id	discounte	total_discounted_price	total_item	total_price	user_id
▶	1	3541	3199	5	6740	1
	2	800	3699	1	4499	2
	3	178	712	2	890	3
*	NULL	NULL	NULL	NULL	NULL	NULL

[illegible]

Address:

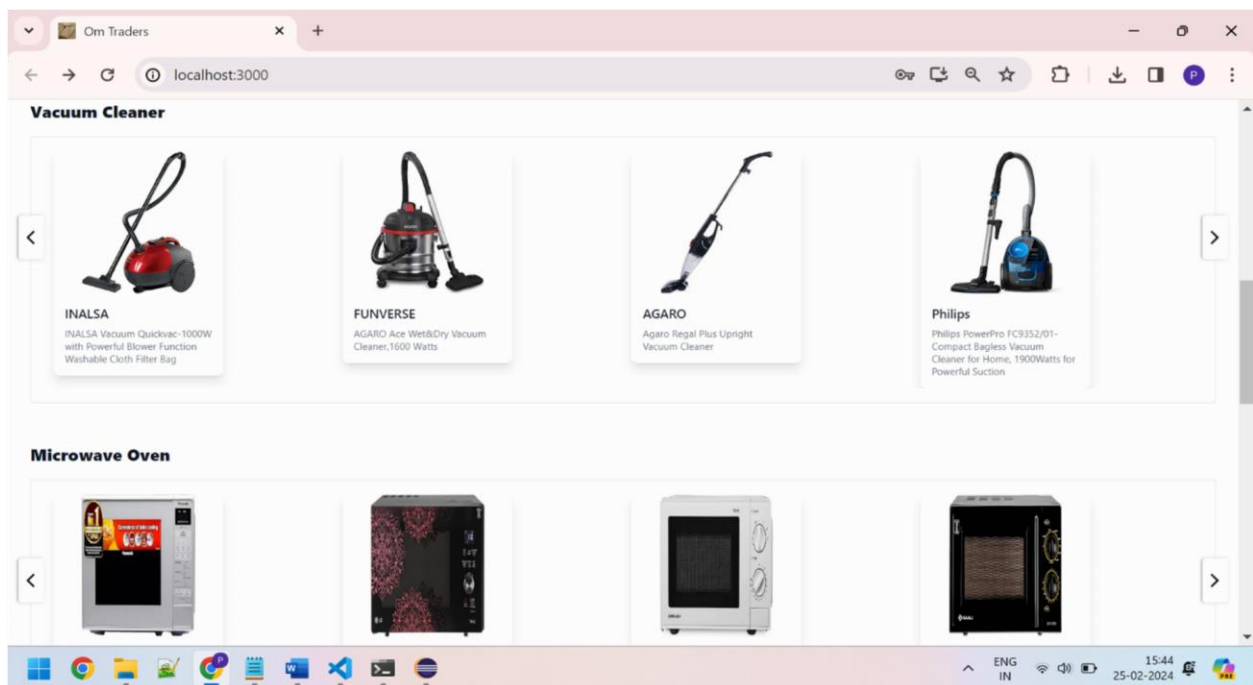
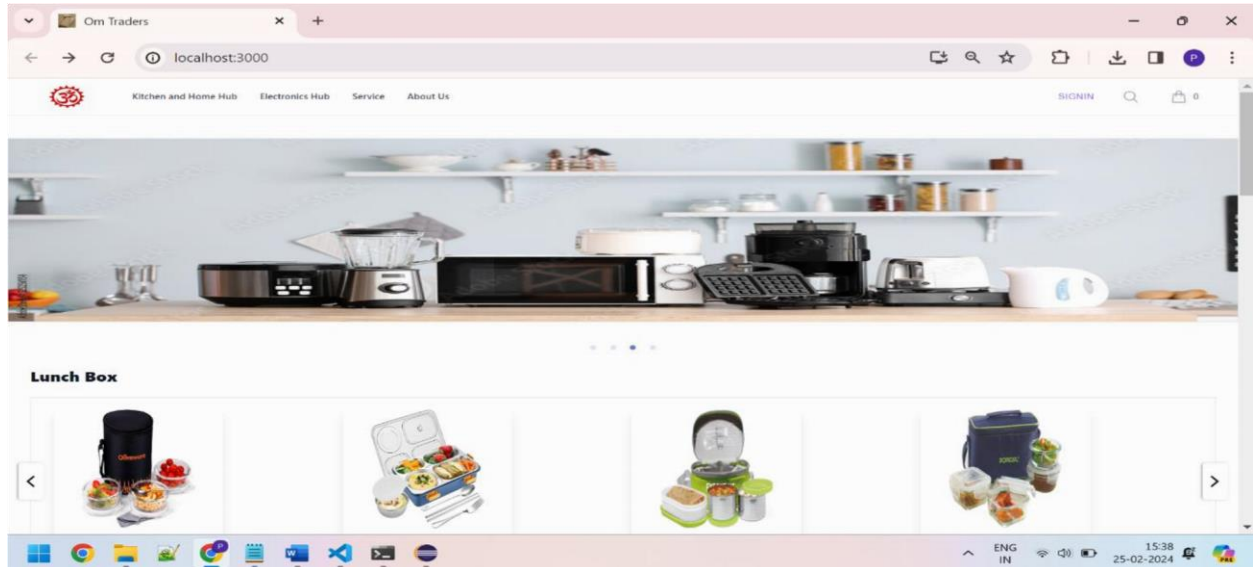
	id	city	first_name	last_name	mobile	state	street_address	zip_code	user_id
▶	1	Nashik	Jatin	Kothartil	9284484166	Maharashtra	nashik	216456	1
	2	Nashik	Pooja	Sonawane	9284484166	Maharashtra	Maitri Park,Model Colony,Jail Road	422101	2
	52	Nashik	Pooja	Sonawane	9284484166	Maharashtra	Flat. no. 206, Royal Residency A-wing, Adgaon.	422003	3
★	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

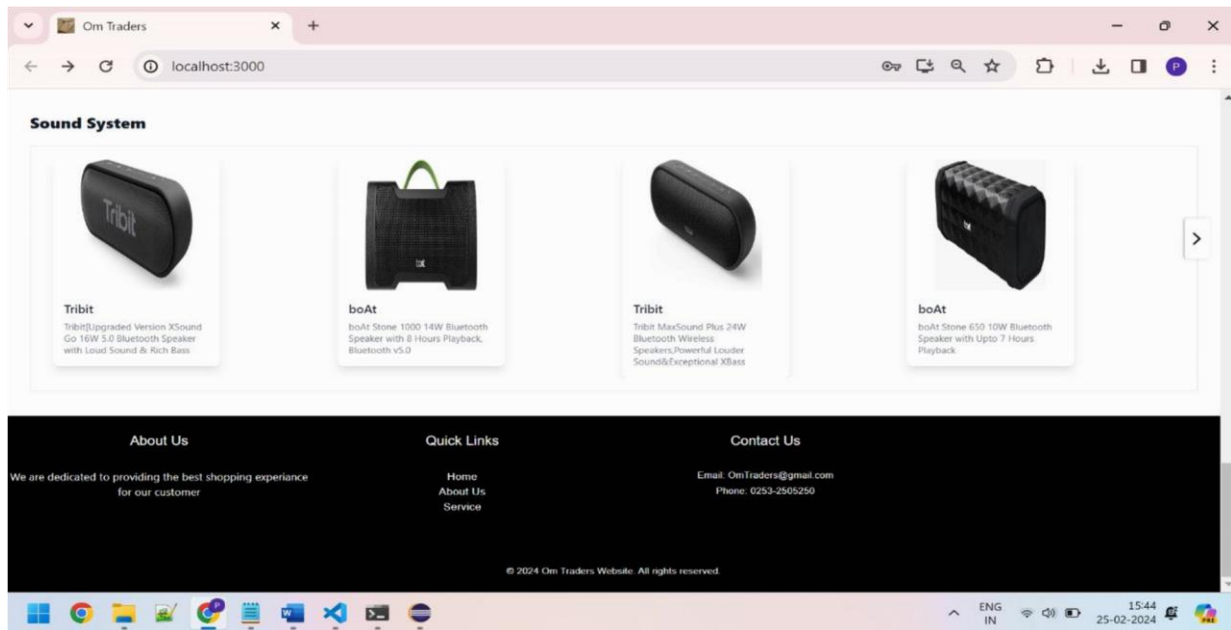
Product:

id	brand	color	created	description	discount_percent	discounted_price	image_url	num_ratings	price	quantity	title	category_id
1	SOPL-OLIVEWARE	Blue	34:35.8	SOPL-OLIVEWARE Teso Pri	57	829	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1950	9	SOPL-OLIVEWARE Lunch Box	3
2	MILTON	Green	39:58.9	MILTON Executive Lunch I	20	356	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	445	5	MILTON Lunch Box	3
3	MATIC HOUSEWARE	Black	13:22.8	MATIC HOUSEWARE Air Ti	67	649	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1999	20	MATIC HOUSEWARE Air Tight i	4
5	Cello	Blue	32:47.4	Cello Puro Steel-X Benz 90	41	328	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	567	9	Cello Water Bottle	8
6	Eureka	Red	37:11.6	Eureka Forbes Quick Clean	17	3699	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	4499	5	Eureka Vacuum Cleaner	10
7	MILTON	Blue	50:19.1	MILTON Gripper 750 Stain	21	312	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	400	4	MILTON Water Bottle	8
8	MILTON	Orange	14:54.2	Milton Delicious Combo St	20	752	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	940	5	Milton Delicious Combo Stainle	3
9	AGARO	Blue	19:02.3	AGARO Compartment Lun	22	499	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	649	10	AGARO Compartment Lunch B	3
11	VAYA TYFFYN	Blue	26:22.3	VAYA TYFFYN Flex Lunch B	5	2270	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	2390	15	VAYA TYFFYN Flex Lunch Box fc	3
12	Allo	Blue	30:33.5	Allo FoodSafe Glass Contai	23	1449	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1872	20	Allo FoodSafe Glass Containers	4
13	Dialust	Black	33:41.4	Dialust Rectangular Plasti	62	379	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	999	20	Dialust Rectangular Plastic Foo	4
14	Hago	white	36:58.5	hago Fridge Storage Boxes	76	289	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1200	15	Hago Fridge Storage Boxes Fre	4
15	RABBY	Silver	39:41.1	RABBY Plastic Pet Storage	83	499	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	2999	30	RABBY Plastic Pet Storage Jar i	4
16	AQUAQLEAN	white	45:49.8	AQUAQLEAN Frosty Plastic	58	459	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1080	50	AQUAQLEAN Frosty Plastic Foo	8
17	SOLARA	Pink Teal	50:52.5	SOLARA Insulated Water E	50	1499	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	2999	50	SOLARA Insulated Water Bottl	8
22	Solimo	Blue	02:52.4	Solimo Water Bottle, Spill-	32	222	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	330	24	Solimo Water Bottle	8
23	boAt	Black	47:10.4	boAt Stone 352 Bluetooth	53	1599	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	3499	5	boAt Bluetooth Speaker	11
26	Pigeon	Black	22:03.6	Pigeon by Stovekraft Cruis	49	1599	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	3193	5	Pigeon Induction	13
29	Wipro	Black	00:36.6	wipro Elato Fmg206 1000	44	5499	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	10000	10	Wipro Mixer	15
30	MILTON	Black	27:33.2	MILTON Premium 3 Burne	50	2999	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	6149	12	MILTON Gas Stove	16
31	Hawkins	Black	31:03.3	Hawkins 3 Litre Contura Bl	5	2003	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	2125	5	Hawkins Pressure Cooker	17
32	Usha	Silver	42:50.2	Usha Electric Kettle 1200V	27	898	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1240	10	Usha Electric Kettle	18
33	Crompton	Black	46:59.6	Crompton SUREBREEZE SE	45	1398	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	2599	11	Crompton Ceiling Fan	19
34	Usha	Black	49:25.5	Usha Pentacool 5 Blade 4C	-1	3730	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	3730	10	Usha Stand Fan	20
35	Ahuja	Black	54:25.0	Ahuja ACM-96 Paging Mici	54	3100	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	6720	4	Ahuja ACM-96 Paging Microph	21
54	Wipro	Blue	52:28.9	Wipro Vesta 2200-Watt Hi	33	1999	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	2999	50	Wipro Vesta 2200-Watt Heavy	52
59	Tefal	Green	19:16.1	Tefal Eco Master Electric I	27	1469	https://m.media-amazon.com/images/I/41UWwvZtZtL.jpg	0	1999	20	Tefal Eco Master Electric 1800	52

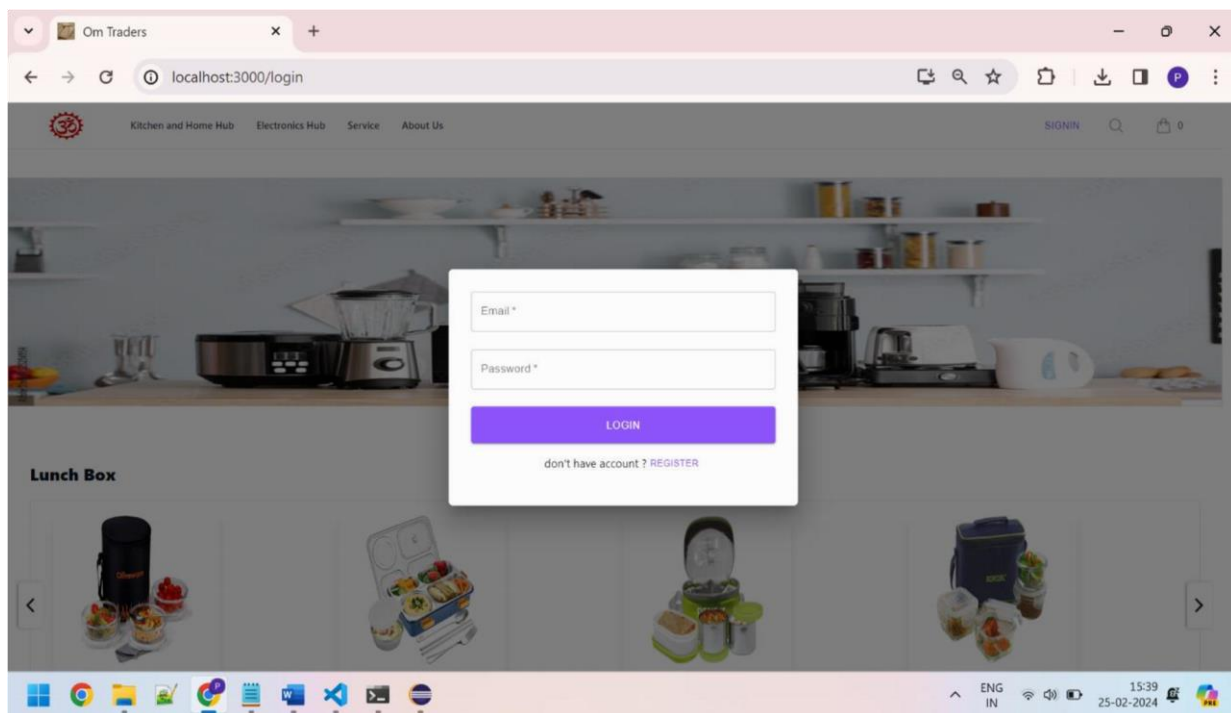
7. SCREENSHOTS

1. Home page-

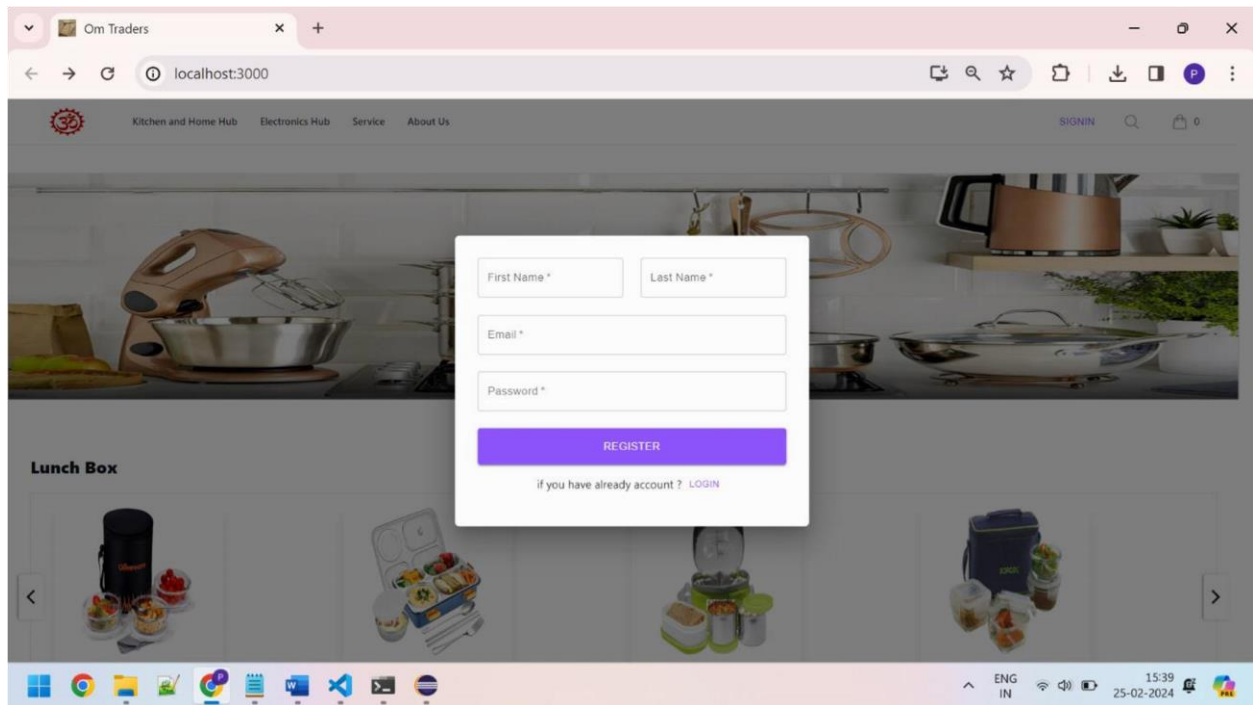




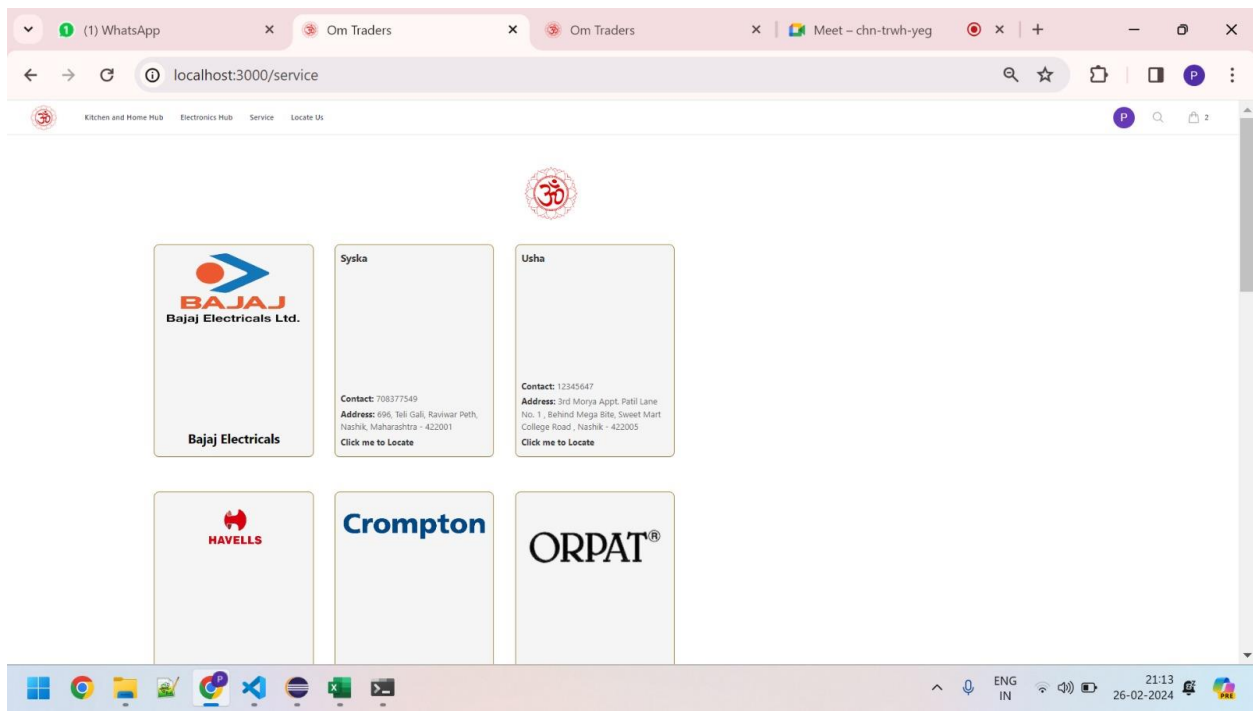
2.Login page-



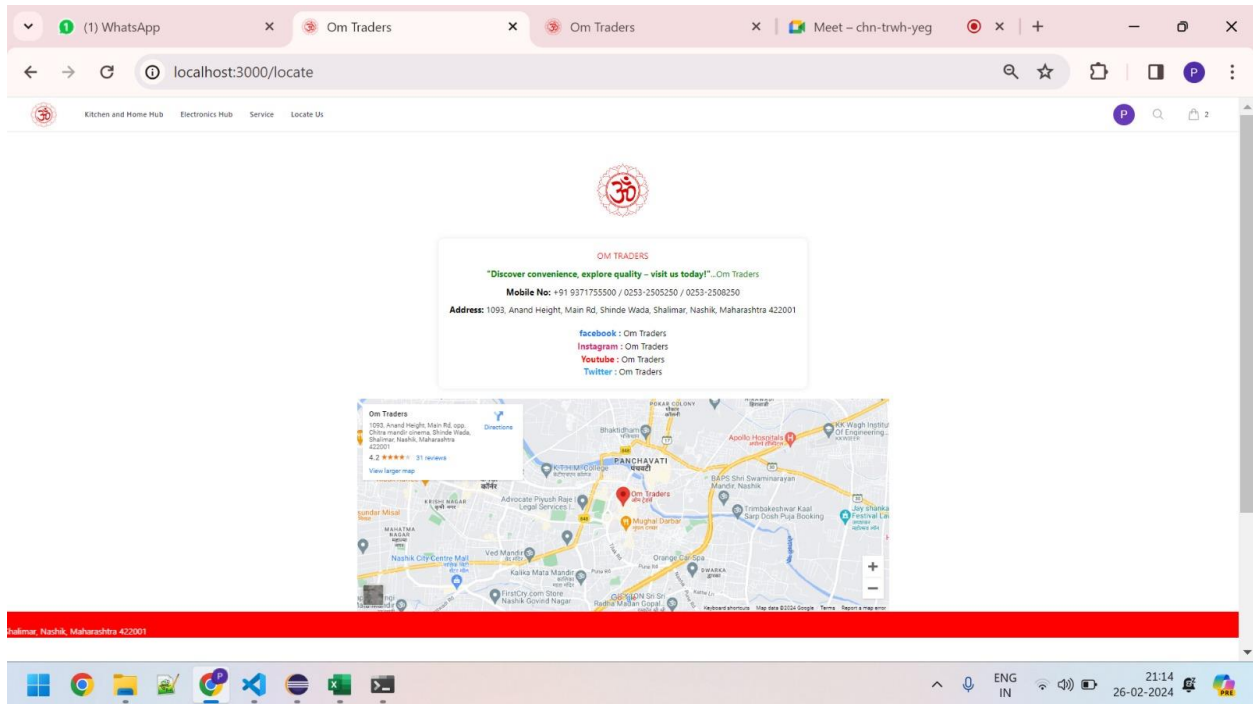
3.User Registration page:



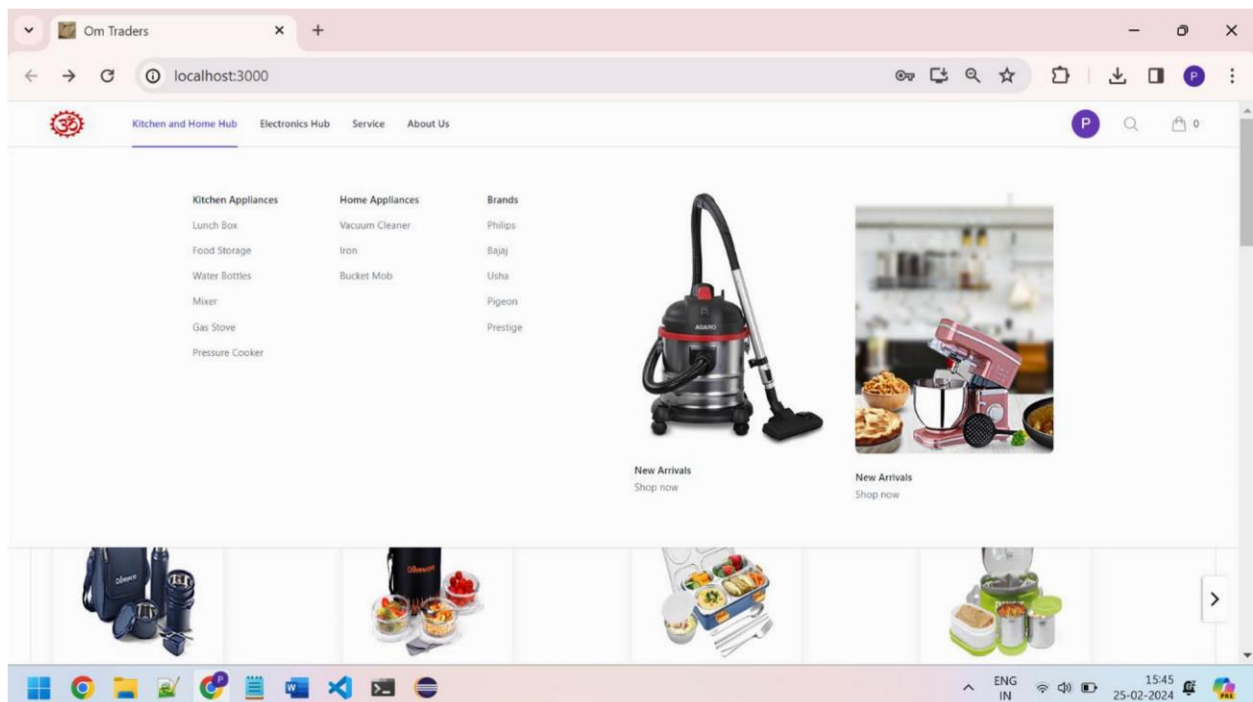
4.Service:

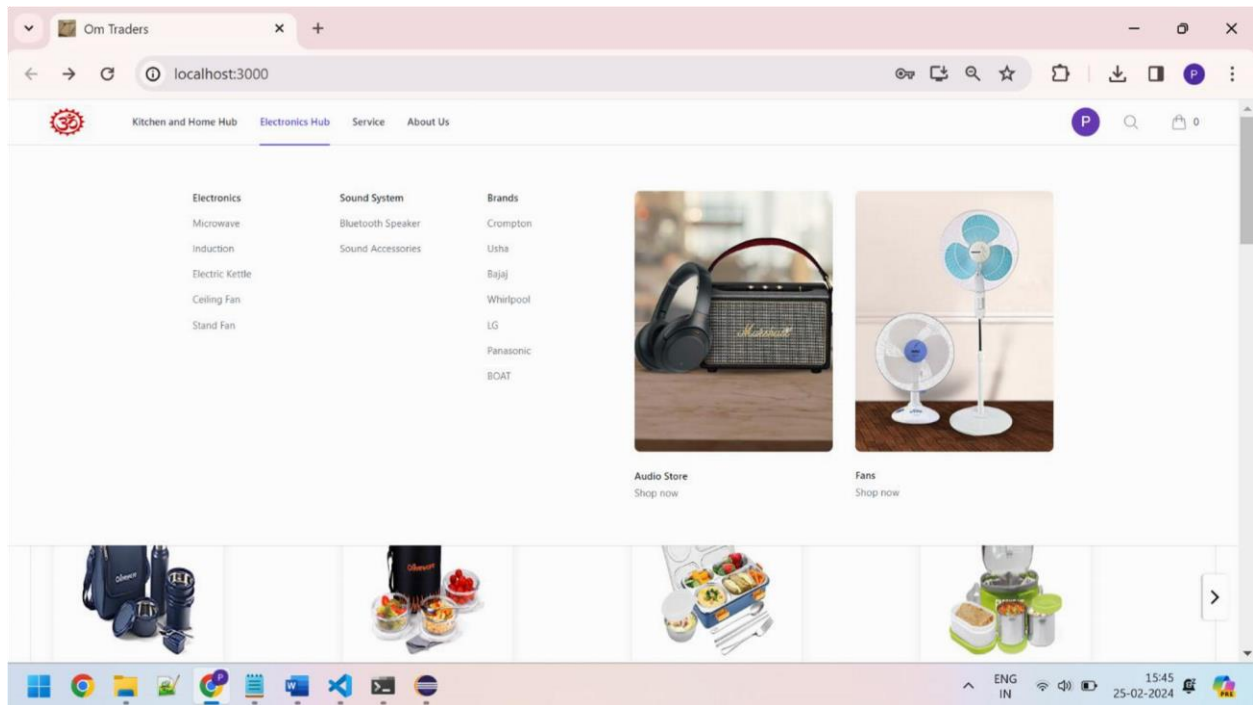


5. Locate Us:

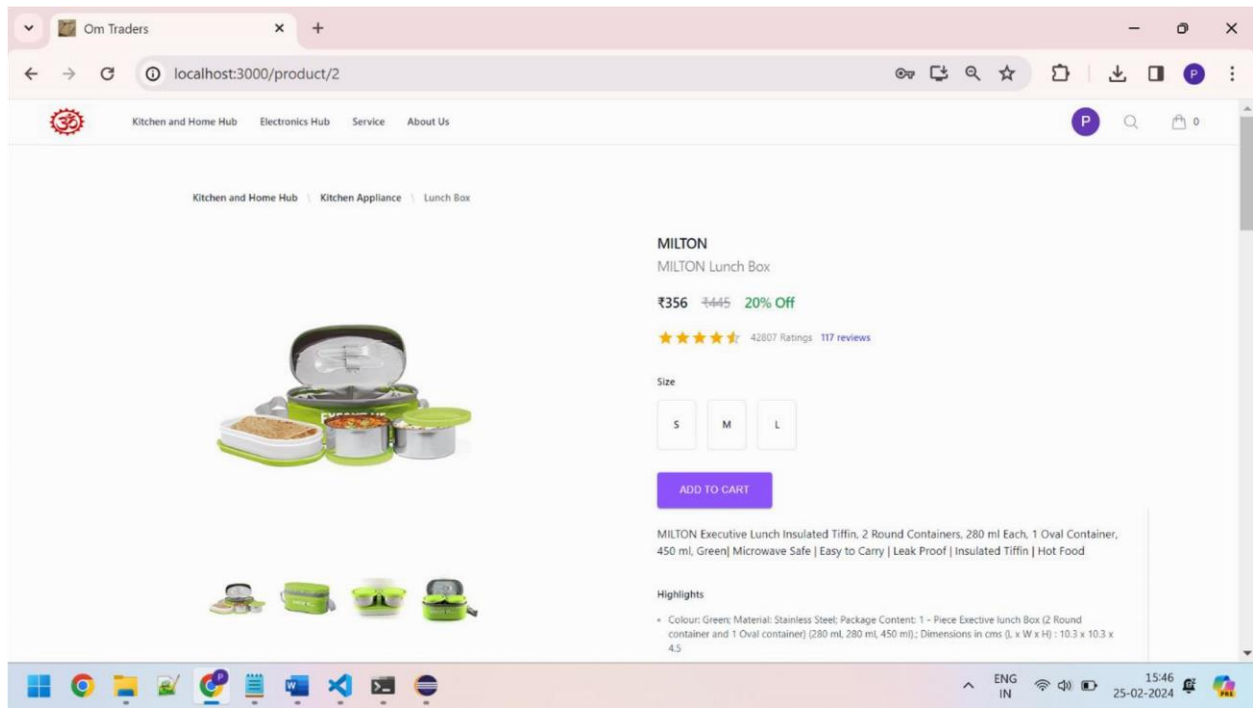


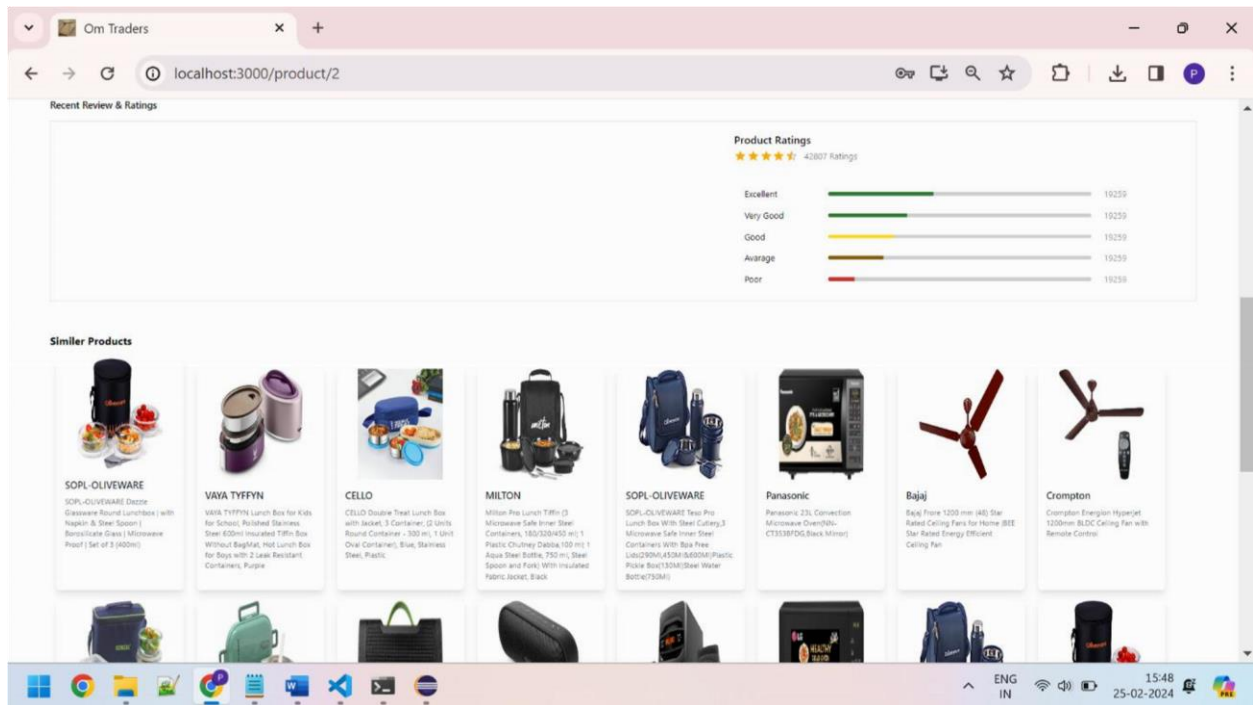
6. Lists of Categories:



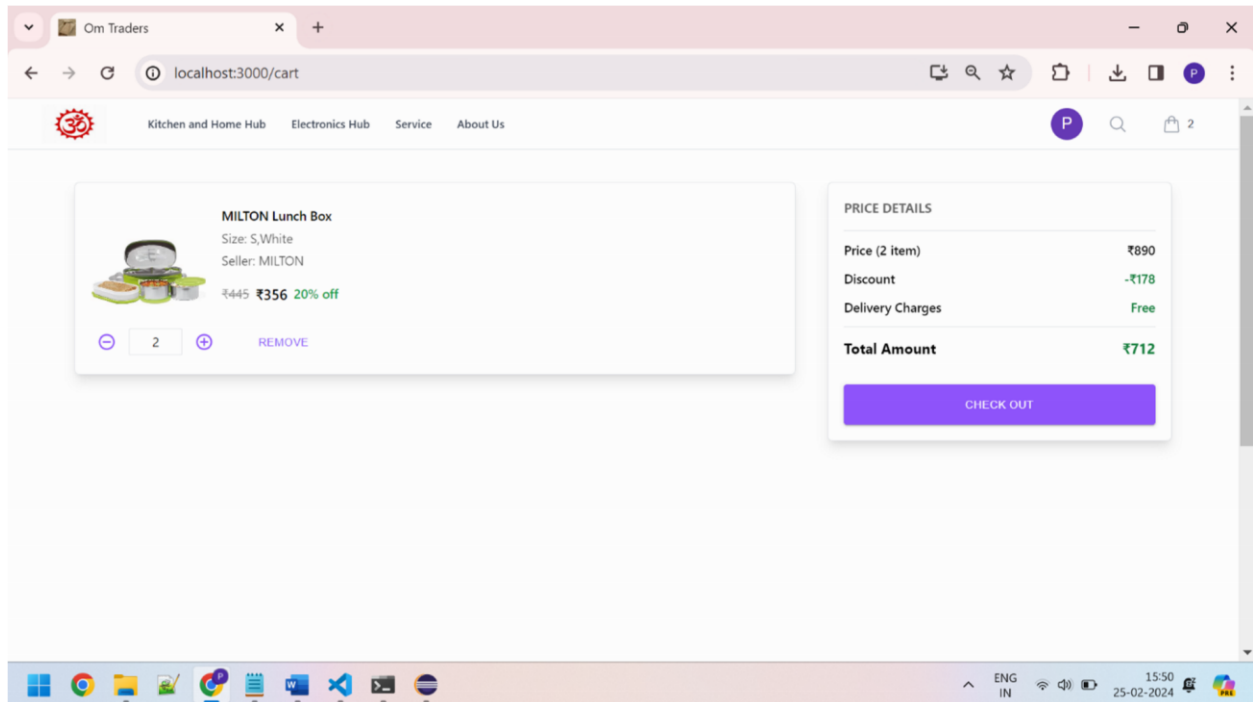


6.Product Page:





7.Cart Page:



8. Delivery Address Page:

The screenshot shows the Om Traders checkout page at step 2: Delivery Address. The browser address bar shows `localhost:3000/checkout?step=2`. The page has a navigation bar with links: Kitchen and Home Hub, Electronics Hub, Service, and About Us. A progress bar at the top indicates the current step: Login (checked), Delivery Address (active), Order Summary (3), and Payment (4). A "BACK" link is visible. The main form contains input fields for First Name (Pooja), Last Name (Sonawane), Address (Flat. no. 206, Royal Residency A-wing, Adgaon), City (Nashik), State/Province/Region (Maharashtra), Zip / Postal code (422003), and Phone Number (9284484166). A "DELIVERD HERE" button is at the bottom.

Om Traders

Kitchen and Home Hub Electronics Hub Service About Us

Progress: Login Delivery Address Order Summary Payment

BACK

First Name * Pooja Last Name * Sonawane

Address * Flat. no. 206, Royal Residency A-wing, Adgaon

City * Nashik State/Province/Region * Maharashtra

Zip / Postal code * 422003 Phone Number * 9284484166

DELIVERD HERE

9. Order Summary Page:

The screenshot shows the Om Traders checkout page at step 3: Order Summary. The browser address bar shows `localhost:3000/checkout?step=3&order_id=5`. The page has a navigation bar with links: Kitchen and Home Hub, Electronics Hub, Service, and About Us. A progress bar at the top indicates the current step: Login (checked), Delivery Address (checked), Order Summary (active), and Payment (4). A "BACK" link is visible. The main form displays the customer's details: Pooja Sonawane, Flat. no. 206, Royal Residency A-wing, Adgaon, Nashik Maharashtra 422003, and Phone Number 9284484166. Below this, a product card for "MILTON Lunch Box" is shown with a size of S, White, seller MILTON, and a price of ₹445, ₹356 (20% off). To the right, a "PRICE DETAILS" table shows the price of 2 items as ₹890, a discount of ₹178, and delivery charges as Free, resulting in a total amount of ₹712. A "PAYMENT" button is at the bottom.

Om Traders

Kitchen and Home Hub Electronics Hub Service About Us

Progress: Login Delivery Address Order Summary Payment

BACK

Pooja Sonawane

Flat. no. 206, Royal Residency A-wing, Adgaon, Nashik Maharashtra 422003

Phone Number 9284484166

MILTON Lunch Box

Size: S, White

Seller: MILTON

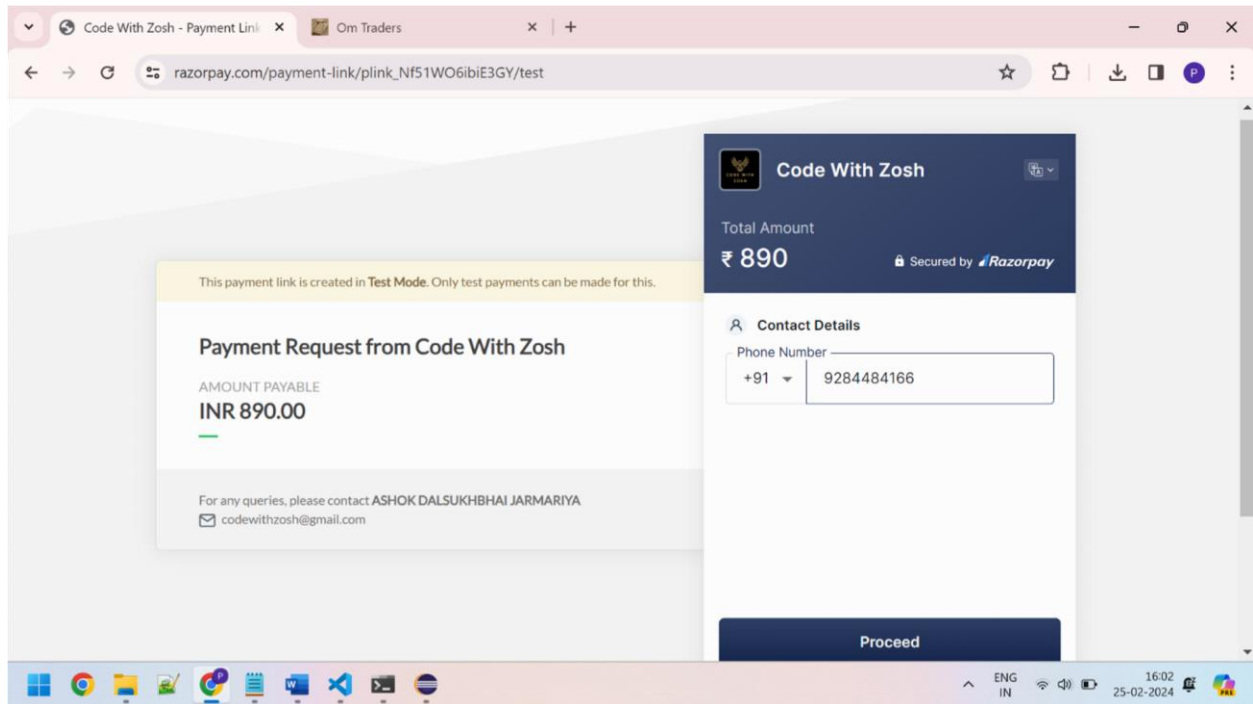
₹445 ₹356 20% off

PRICE DETAILS

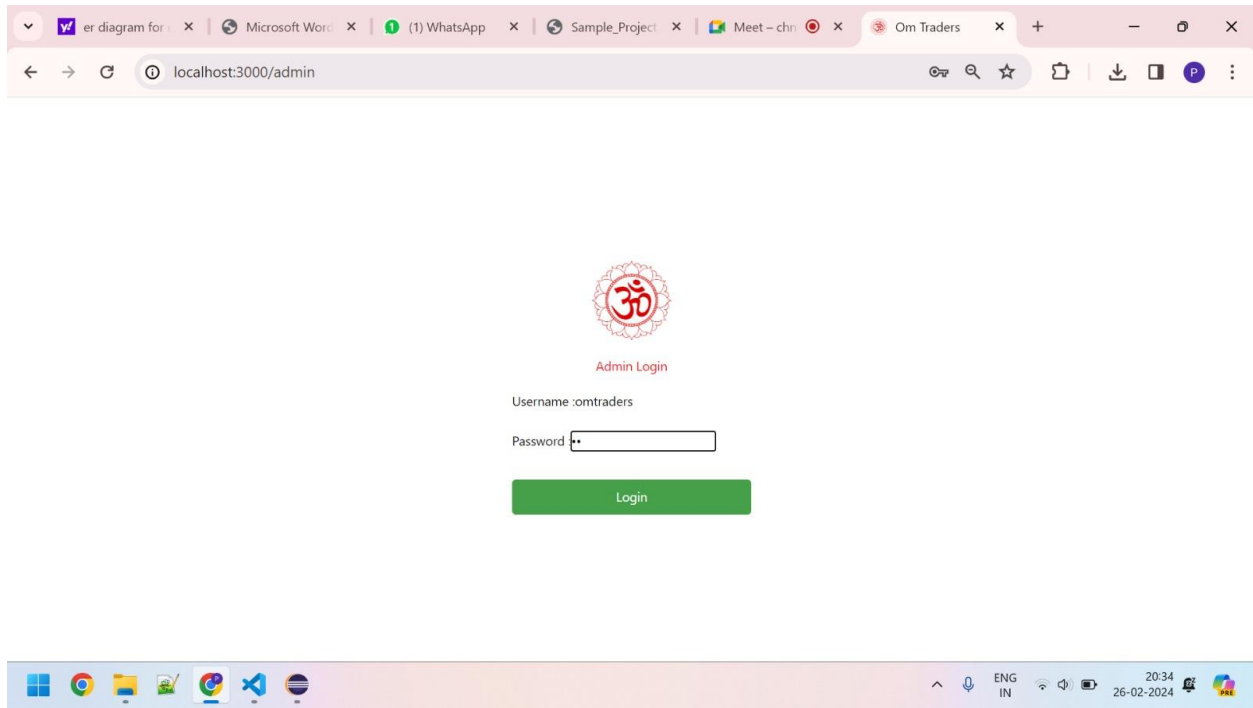
Price (2 item)	₹890
Discount	-₹178
Delivery Charges	Free
Total Amount	₹712

PAYMENT

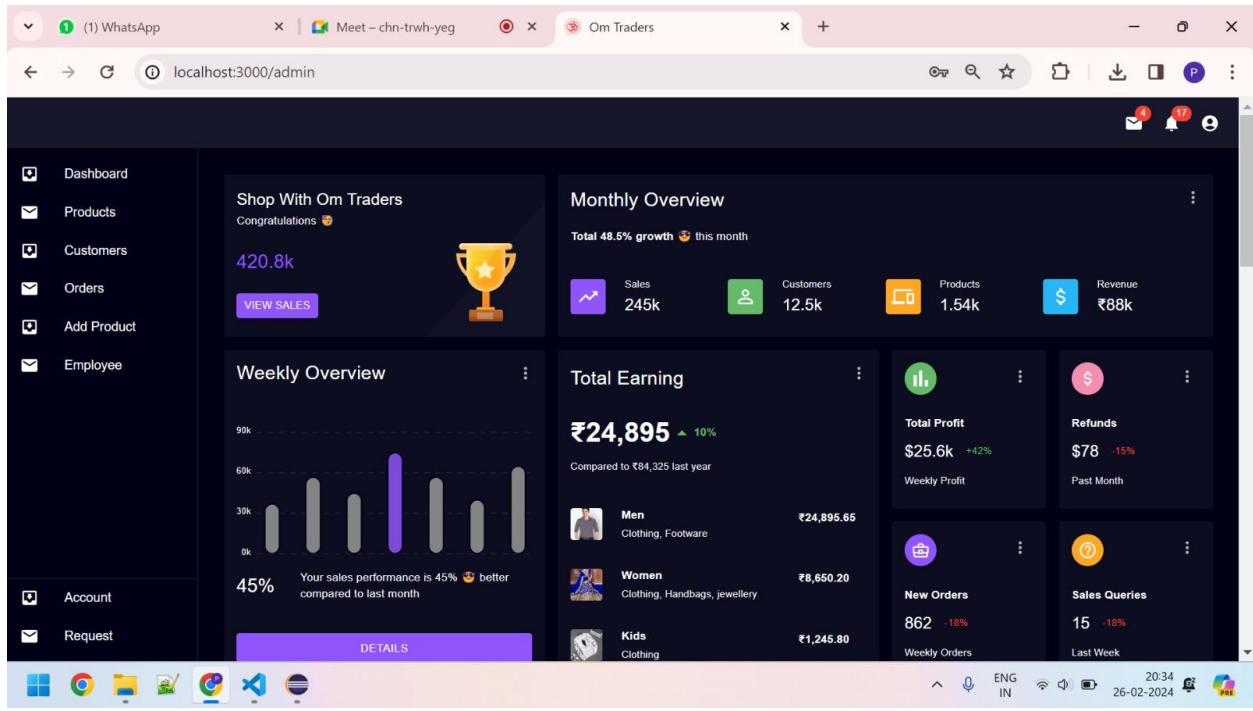
10.Payment Gateway Page:



Admin Login Page:



Admin DashBoard:



Add Product Page:

The screenshot shows the "Add New Product" page in the Om Traders application. The page is accessed via localhost:3000/admin/product/create. It contains a form with the following fields:

- Image URL
- Brand
- Color
- Price
- Discounted Price
- Discount Percentage
- Top Level Category
- Second Level Category
- Third Level Category
- Description
- Size Name (with options S, M, L)
- Quantity

A "ADD NEW PRODUCT" button is located at the bottom of the form. The page is accessed via a web browser at localhost:3000/admin/product/create. The browser tabs show WhatsApp, a meeting link, and the Om Traders application.

Products Details Page:

Dashboard

Products

Customers

Orders

Add Product

Employee

Account

Request

Category

Availability

Sort By Price

All Products

Image	Title	Category	Price	Quantity	Update	Delete
	Seleno Water Bottle Seleno	water_bottles	222	24	UPDATE	DELETE
	Hago Fridge Storage Boxes Hago	food_storage	289	15	UPDATE	DELETE
	MILTON Water Bottle MILTON	water_bottles	312	4	UPDATE	DELETE
	Celo Water Bottle Celo	water_bottles	328	9	UPDATE	DELETE
	MILTON Lunch Box MILTON	lunch_box	356	5	UPDATE	DELETE
	Diatut Rectangular Plastic Food Storage Container with Air Tight Lid Diatut	food_storage	379	20	UPDATE	DELETE
	AQUAGLEAN Freshly Plastic Food Grade Fridge Square Water Bottle AQUAGLEAN	water_bottles	459	50	UPDATE	DELETE
	AGARD Compartment Lunch Box/Container AGARD	lunch_box	499	10	UPDATE	DELETE
	RABBY Plastic Pet Storage Jar and Container RABBY	food_storage	499	30	UPDATE	DELETE
	MATIC HOUSEWARE Air Tight Containers Storage Set For Kitchen MATIC HOUSEWARE	food_storage	649	20	UPDATE	DELETE

Windows Taskbar

System Tray

Order Details/Status Page:

Dashboard

Products

Customers

Orders

Add Product

Employee

Account

Request

Sort

Status

Sort By

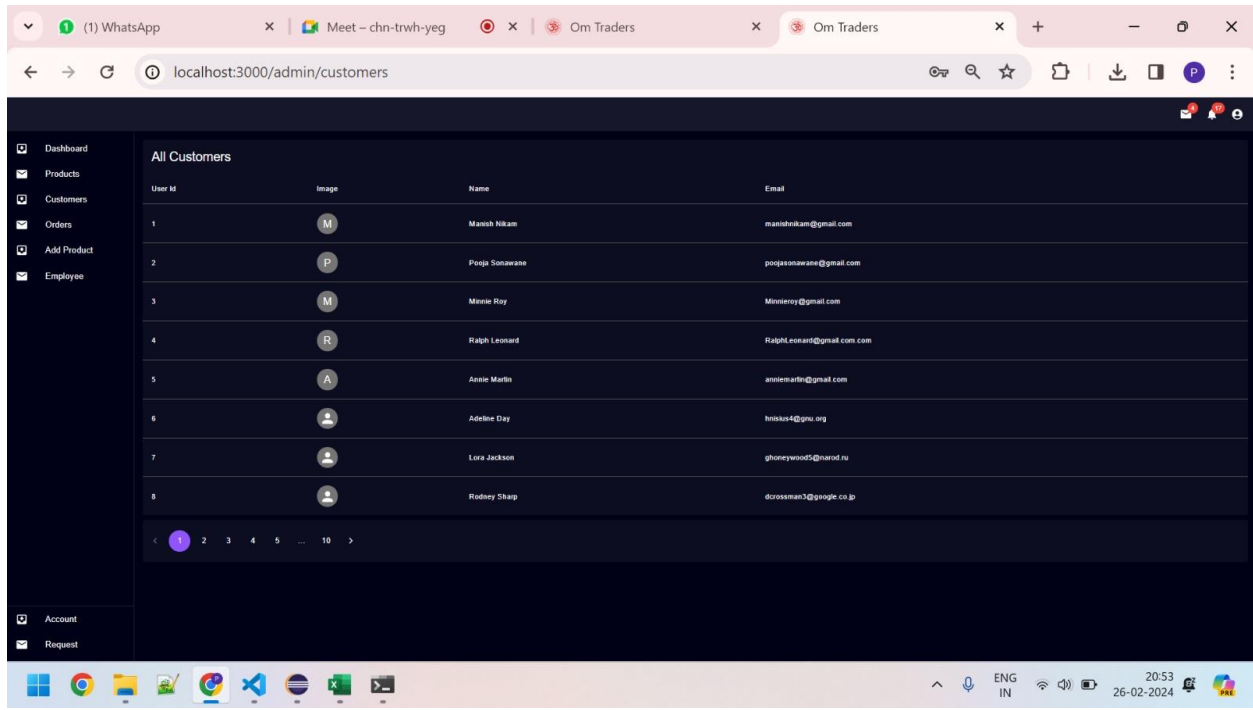
All Orders

Image	Title	Price	Id	Status	Update	Delete
	SOPL-OLIVEWARE Lunch Box, SOPL-OLIVEWARE	3900	1	PENDING	STATUS	DELETE
	MILTON Lunch Box, SOPL-OLIVEWARE Lunch Box, MILTON, SOPL-OLIVEWARE	6748	2	PENDING	STATUS	DELETE
	Eureka Vacuum Cleaner, Eureka	4499	3	PENDING	STATUS	DELETE
	Eureka Vacuum Cleaner, Eureka	4499	4	PENDING	STATUS	DELETE
	MILTON Lunch Box, MILTON	890	5	PENDING	STATUS	DELETE

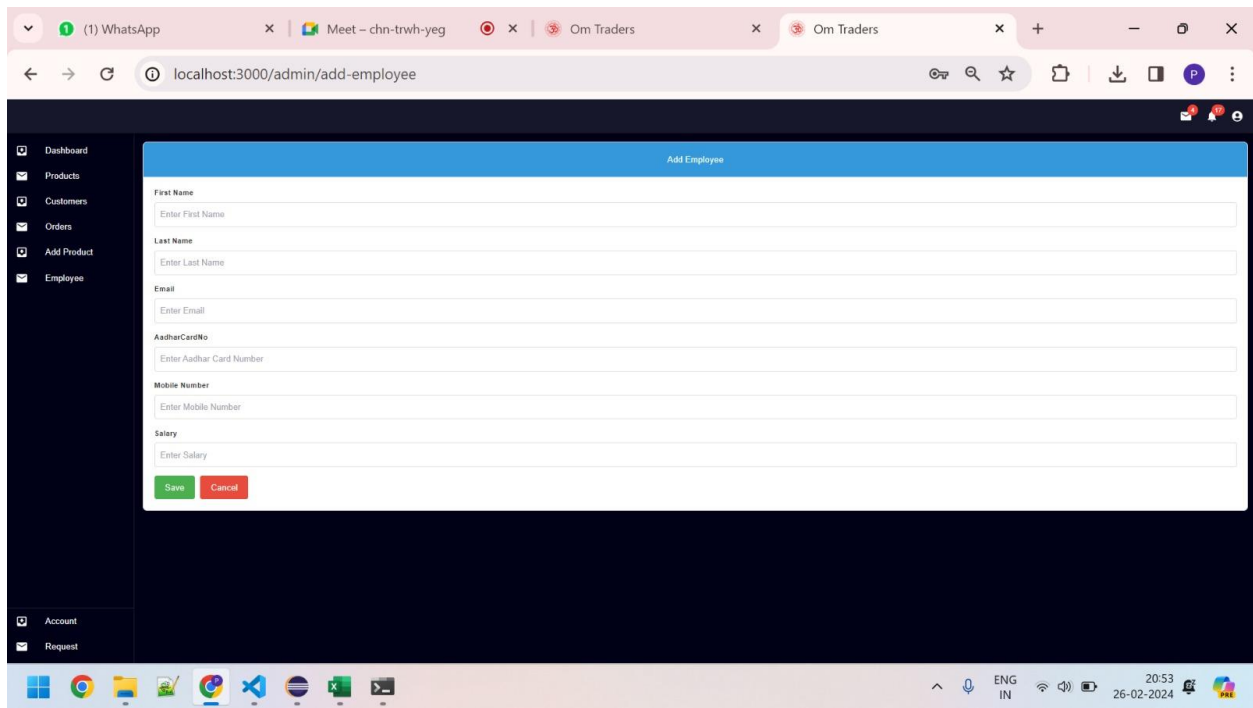
Windows Taskbar

System Tray

Customer Details Page:



Add Employee Details Page:



Employee Details Page:

localhost:3000/admin/employee

Add Employee

List Employee

Employee ID	Employee First Name	Employee Last Name	Employee Email	Employee AadharCardNo	Employee Mobile No.	Employee Salary	Actions
3	kiran	jain	kiranjain@gmail.com		7845129956		Update Delete
2	ram	dalvi	ramdalvi		9865327441		Update Delete
1	Manish	Nikam	manishnikam@gmail.com		9845657512		Update Delete

Account Request

20:59 26-02-2024

5. CONCLUSION

The Om Traders Home Appliances Management System is a comprehensive solution designed to streamline the operations of home appliances retail businesses. By providing features for inventory management, sales, purchases, customer relationships, and employee management, the system aims to improve efficiency, enhance customer satisfaction, and drive business growth. Further enhancements and optimizations can be made based on user feedback and changing business requirements.

Future Scope:

- Integration with online sales channels and payment gateways.
- Implementation of predictive analytics for demand forecasting.
- Expansion of CRM functionalities, such as email marketing and customer segmentation.
- Integration with accounting software for seamless financial management.
- Mobile application development for on-the-go access to system functionalities.