



**UNIVERSITY OF
PLYMOUTH**

NSBM Green University

Faculty of Computing

PUSL2024 Software Engineering 2 (23/AU/M)

Green Supermarket -Java Web Project

Project Report (Course work)

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Introduction.

Green supermarket is a leading supermarket in the supermarket industry. With a large customer base, a main drawback is its outdated website compared to its evolved business organization. As a solution our team has decided to make a responsive but a simple java website with the help of java servlet and SQL database technology.

Our Aim.

Our main objective is to deliver a user friendly and admin friendly based website so that by both end users could interfere with a good user experience.

Objectives.

The main objective of this website is to deliver a user interface so that the customers can have a superb user experience as at the end of the situation there should be good administration so that the administration management should function properly.

The following points are the objective to make the customer end user experience reliable.

- Easy purchase procedure.
- Large range of items.
- Recognizing the needs of customers as feedback.

These are brief objectives to enhance the administrator control over the website.

- Including an admin dashboard (add items, edit items, remove items, customer tracking, customer management, order tracking).

System Requirements Analysis.

Functional requirements:

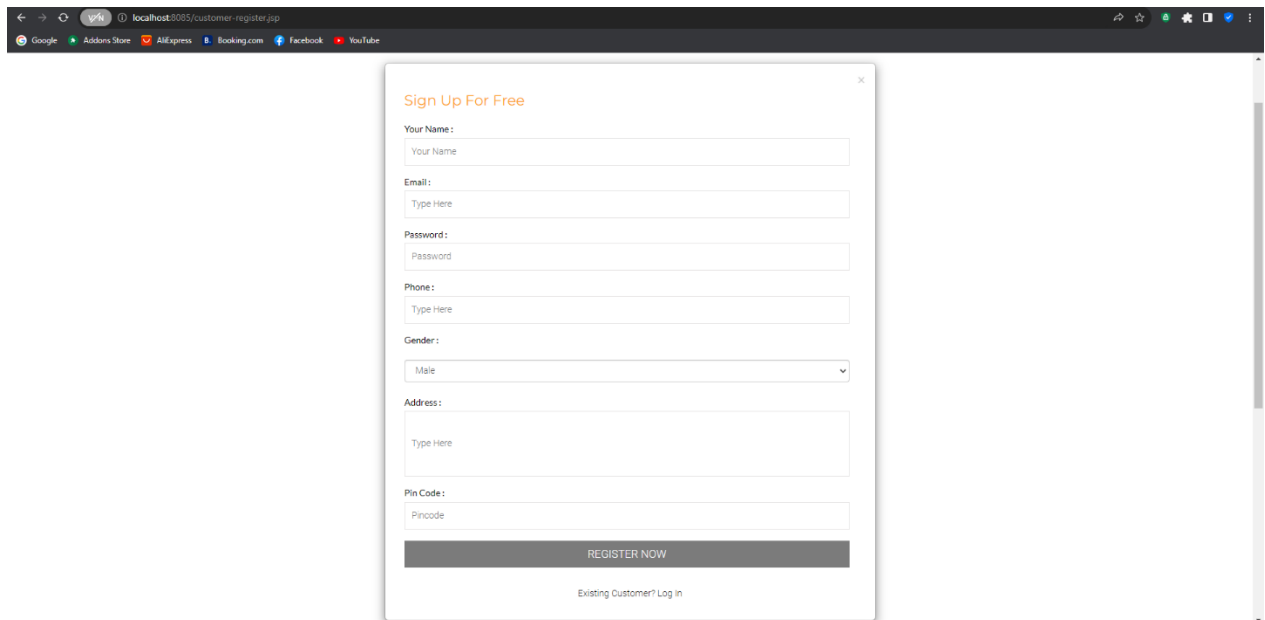
1. Simple yet organized product list - When the administrator adds the product, the product add form has an option to select the product category.
2. Add to cart and item checkout – Each and every item card has an add to cart option as an extra feature only registered and logged customers can do the relevant transaction and proceed to checkouts.
3. Customer account management – The admin has the capability to manage the customers via the admin dashboard.
4. Order histories and transactions tracking – Via admin dashboard the admin has the capability to track the order histories.
5. Inventory management – The admin has the ability to edit the item inventory.

Non-functional requirements:

1. Switching between night mode and light mode.
2. Seamless user-friendly environment – The user interface is a very simple and beautiful interface to interact with.
3. Performance – Green supermarket website responds quickly to user requests, with minimal loading times.
4. Security - Green supermarket website is secure and protects user's personal and payment information.
5. Data Integrity - Green supermarket website ensures that data is stored correctly and is not corrupted.

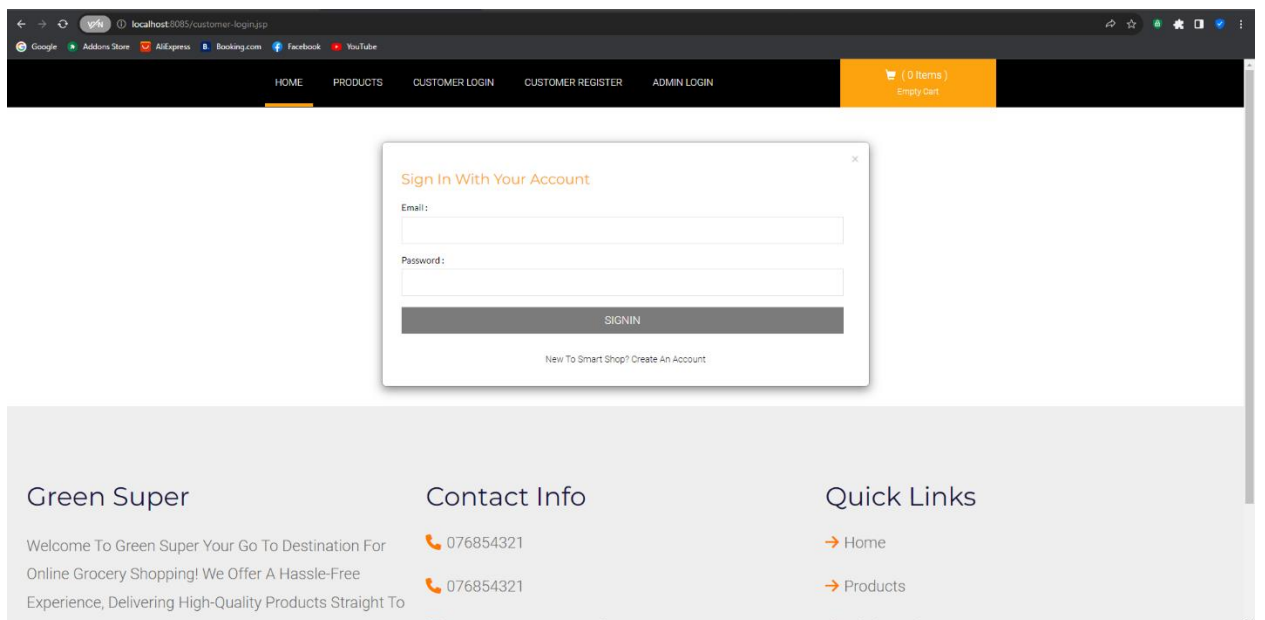
Screen Captures Of The Project.

1. Registration.



A screenshot of a web browser showing a registration form titled "Sign Up For Free". The form is displayed in a modal window. It contains the following fields: "Your Name:" (text input), "Email:" (text input), "Password:" (text input), "Phone:" (text input), "Gender:" (dropdown menu with "Male" selected), "Address:" (text input), and "Pin Code:" (text input). Below the fields is a "REGISTER NOW" button. At the bottom of the modal, there is a link that says "Existing Customer? Log in". The browser's address bar shows "localhost:8085/customer-register.jsp".

2. Login.



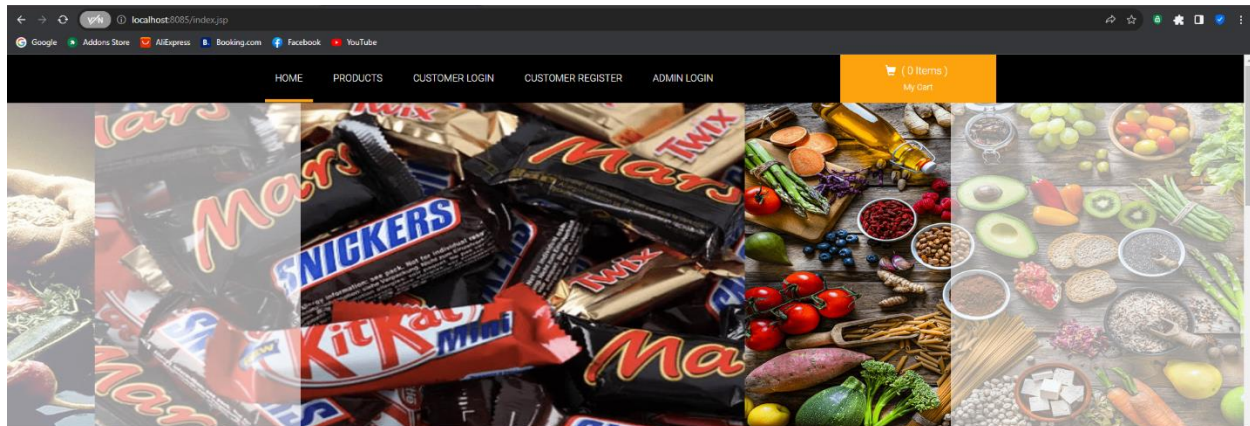
A screenshot of a web browser showing a login form titled "Sign In With Your Account". The form is displayed in a modal window. It contains the following fields: "Email:" (text input) and "Password:" (text input). Below the fields is a "SIGNIN" button. At the bottom of the modal, there is a link that says "New To Smart Shop? Create An Account". The browser's address bar shows "localhost:8085/customer-login.jsp".

Below the login modal, the main content area of the website is visible. It features a navigation bar with links: HOME, PRODUCTS, CUSTOMER LOGIN, CUSTOMER REGISTER, and ADMIN LOGIN. There is also a shopping cart icon showing "0 Items" and "Empty Cart".

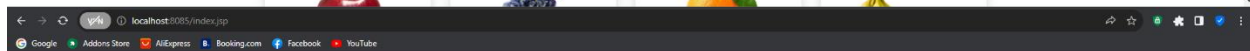
The footer section is divided into three columns:

- Green Super**: Welcome To Green Super Your Go To Destination For Online Grocery Shopping! We Offer A Hassle-Free Experience, Delivering High-Quality Products Straight To
- Contact Info**: 076854321, 076854321
- Quick Links**: Home, Products

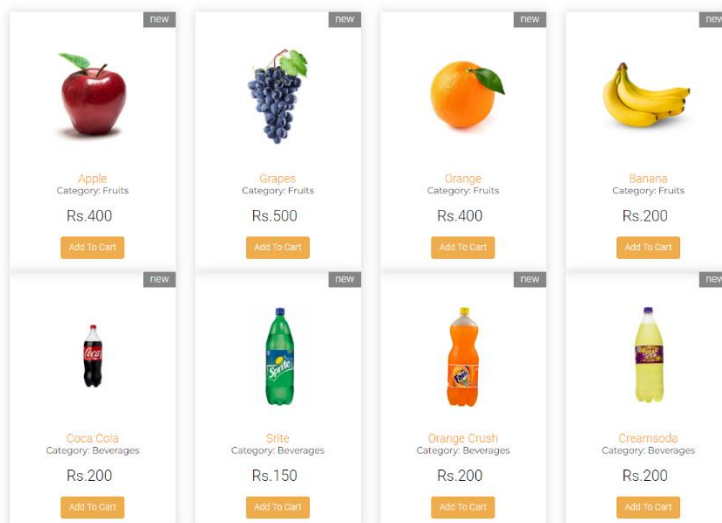
3. Main page.



Our Products



Our Products



Green Super

Welcome To Green Super Your Go To Destination For Online Grocery Shopping! We Offer A Hassle-Free Experience, Delivering High-Quality Products Straight To

Contact Info

076854321

076854321

Quick Links

→ Home

→ Products

4. Add to cart and Checkout.



← → ↻ 🌐 localhost:8085/checkout.jsp 🔍 ⚙️ 🌱 🏠 📄 📱 📶

🔍 Google 🌱 Addons Store 🛒 AliExpress 📄 Booking.com 📱 Facebook 📶 YouTube

HOME PRODUCTS MY ORDERS LOGOUT 🛒 (2 items) My Cart

CHECK OUT

MY SHOPPING BAG

SR.No	Product	Quantity	MRP(Rs)	Selling Price(Rs)	Total Price(Rs)	Action
1	 Grapes	1 Change	Rs.	500 Rs.	500 Rs.	
					Total Amount:- 900.0 Rs.	

Billing Address

← → ↻ 🌐 localhost:8085/checkout.jsp 🔍 ⚙️ 🌱 🏠 📄 📱 📶

🔍 Google 🌱 Addons Store 🛒 AliExpress 📄 Booking.com 📱 Facebook 📶 YouTube

Billing Address

Your Name

Alex

Phone Number

12321421321

Email Id

Alex@gmail.Com12

Address

Rijiji

Pin Code


13231


Select Address Type





Home


Select Payment Mode

COD

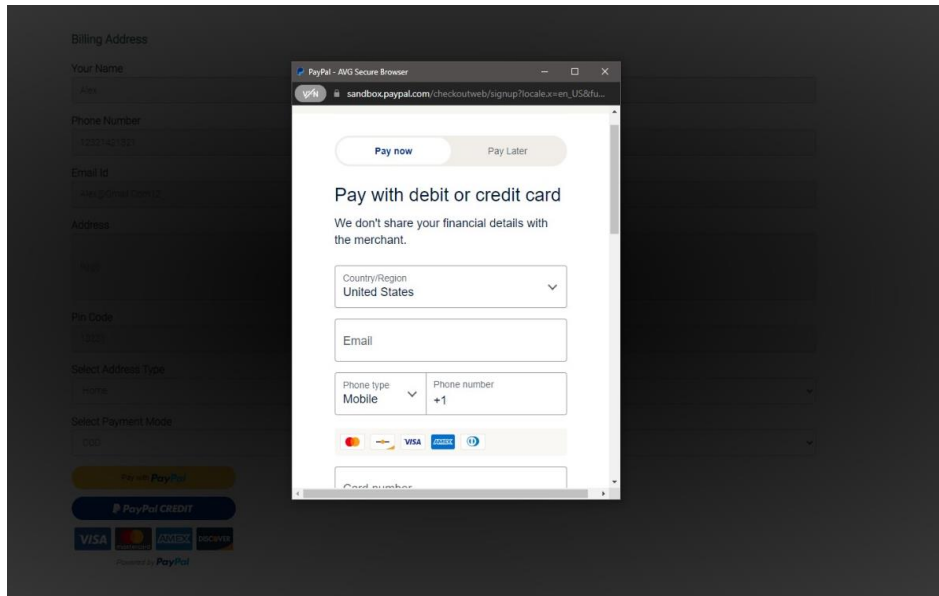
Pay with 



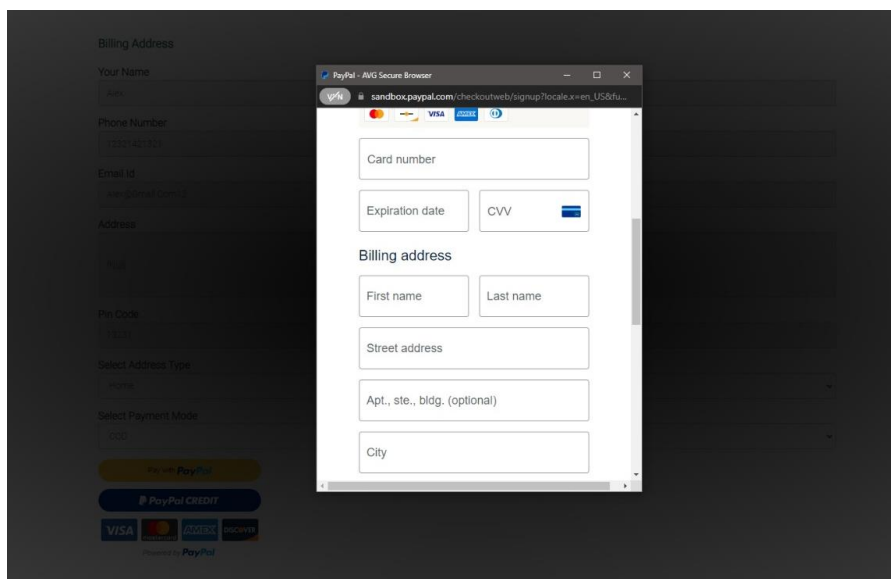


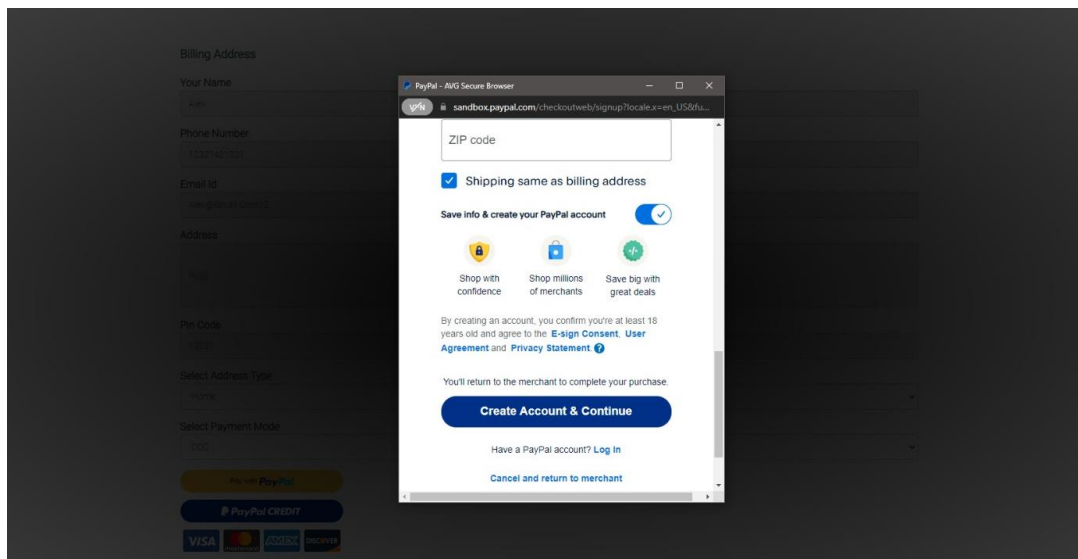
Powered by 

5. PayPal payment integration.

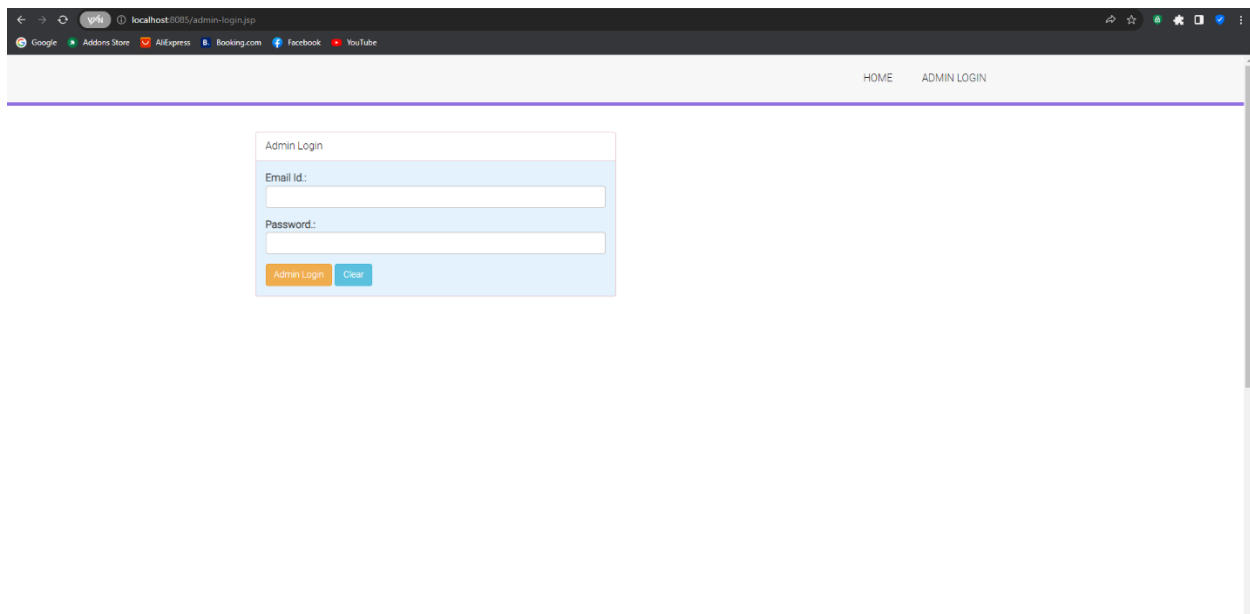


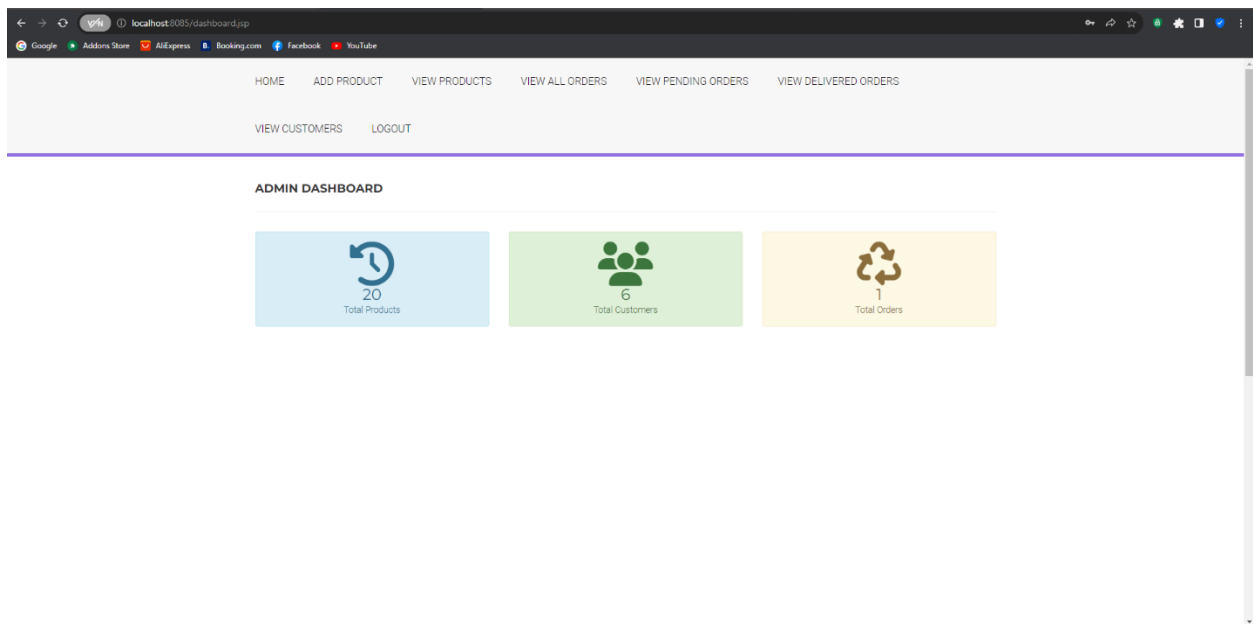
- Along with the PayPal sandbox integration for testing purposes there is an in-built email receiver to the customer relevant to the payment status.



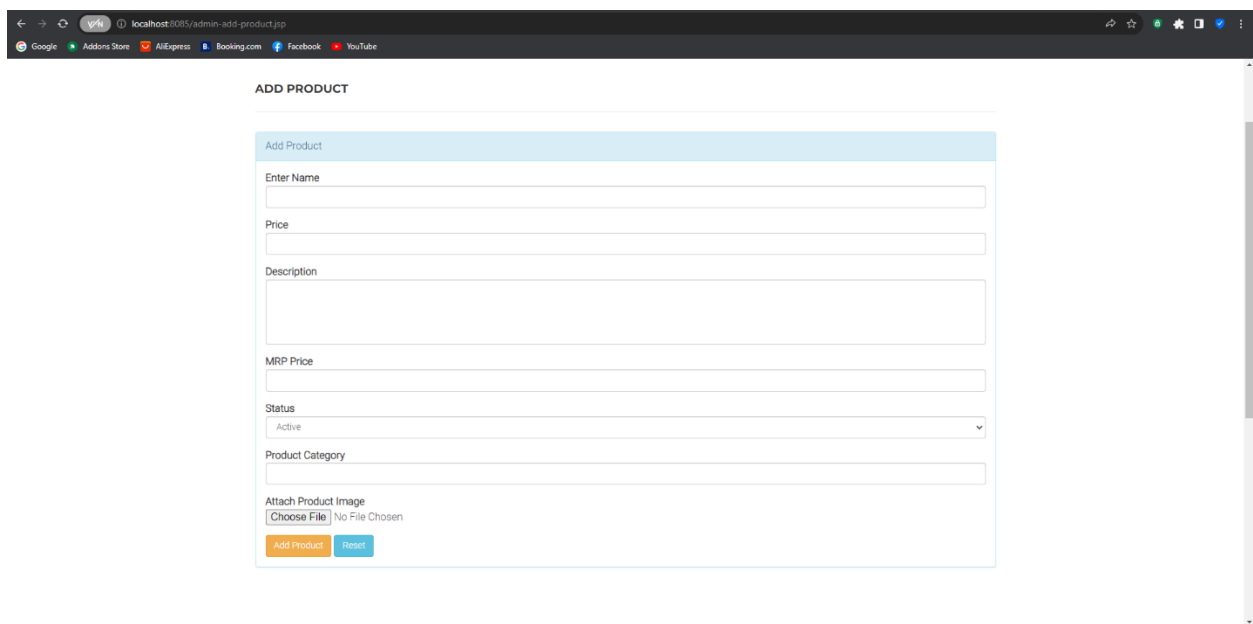


6. Admin login and Admin dashboard.





7. Manage item products, customers, orders and tracking orders.



VIEW CUSTOMERS

LOGOUT

EDIT PRODUCT

Edit Product

Product Id

13

Enter Name

Apple

Price

400

Description

Fresh

MRP Price








Status

Active

Update Product

VIEW PRODUCTS

View Products

#	Name	Image	Description	MRP(Rs)	Price (Rs)	Date	Status	Action
13	Apple		Fresh		400	2023-12-29 17:31:47	Active	Edit Delete
14	Grapes		Fresh		500	2023-12-29 17:36:38	Active	Edit Delete
15	Orange		Fresh		400	2023-12-29 17:45:02	Active	Edit Delete
16	Banana		Fresh		200	2023-12-29 17:45:34	Active	Edit Delete
17	Coca Cola		Soft Drinks		200	2023-12-29 17:46:58	Active	Edit Delete
18	Sirte		Soft Drinks		150	2023-12-29 17:47:50	Active	Edit Delete
19	Orange Crush		Soft Drinks		200	2023-12-29 18:00:02	Active	Edit Delete


localhost:8085/admin-all-orders.jsp

GoogleAddons StoreAliExpressBooking.comFacebookYouTube

HOMEADD PRODUCTVIEW PRODUCTSVIEW ALL ORDERSVIEW PENDING ORDERSVIEW DELIVERED ORDERSVIEW CUSTOMERSLOGOUT

ALL ORDERS

All Orders

#	Order No	Customer Details	Product	Qty	Total Amount	Status	Order Date & Time	Payment Mode	Action
3	1001	Alex12321421321 Alex@gmail.Com 1234567890 Home12321	 Banana	1	400	Pending	2023-12-29 13:59:12	COD	<button>Deliver</button>

Navbar - Bootstrap v5.3Color - Bootstrap v5.3Online Shopping SystemWhatsAppbananas.jpg - Google Search

localhost:8085/admin-delivered-orders.jsp

GoogleAddons StoreAliExpressBooking.comFacebookYouTube

HOMEADD PRODUCTVIEW PRODUCTSVIEW ALL ORDERSVIEW PENDING ORDERSVIEW DELIVERED ORDERSVIEW CUSTOMERSLOGOUT

DELIVERED ORDERS

Delivered Orders

#	Order No	Customer Details	Product	Qty	Total Amount	Status	Date	Payment Mode
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depositphotox_417-.jpgimage_427fb27d-b-.jpgwww.cuboy.com.jpgSmarter.jpg1030NP-50L.pork.jpgtwo-fresh-seabass-.jpgchicken-breast_620x.jpg

Type here to search81°F Mostly cloudy7:21 PM12/29/2023

localhost:8085/admin-view-customers.jsp

GoogleAddons StoreAliExpressBooking.comFacebookYouTube

HOMEADD PRODUCTVIEW PRODUCTSVIEW ALL ORDERSVIEW PENDING ORDERSVIEW DELIVERED ORDERS

VIEW CUSTOMERSLOGOUT

VIEW CUSTOMERS

View Customers

#	Name	Email-Id	Gender	Mobile	Address	Date
2	Asdad	Mail@Mal.Sadsa	Male	1312421432421	Sfssaf	2023-12-28 22:40:38
3	hasty	Jesd@Gmail.Sed	Male	12321421321	Asdawda	2023-12-29 00:28:17
4	Thanuka	Jesd@Gmail.Sed	Male	12321421321	Asdwada	2023-12-29 00:49:24
5	Thanuka	Abodzgmail.Com	Male	761417689	Horana	2023-12-29 05:03:44
6	Alex	Alex@Gmail.Com12	Male	12321421321	Rj j j	2023-12-29 13:58:08
7	Alex	Alex@Gmail.Com12	Male	12321421321	Rj j j	2023-12-29 13:58:34

Database.

MySQL Workbench interface showing the **tbladmin** table structure and a query result.

Table: tbladmin

Column	Type	Attributes
id	bigint	AI PK
added_date	datetime	
email	varchar(100)	
password	varchar(100)	
name	varchar(100)	

Query Result:

id	added_date	email	password	name
1	2023-12-28 22:28:00	admin@gmail.com	admin	DataFar

Action Output:

Time	Action	Message	Duration / Fetch
47 19:29:10	SELECT * FROM shoppingssystem.tblcustomer LIMIT 0, 1000	6 row(s) returned	0.031 sec / 0.000 sec
48 19:29:22	SELECT * FROM shoppingssystem.tbladmin LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec

MySQL Workbench interface showing the **tblcart** table structure and a query result.

Table: tblcart

Column	Type	Attributes
id	bigint	AI P
discount_price	varchar(20)	
quantity	int	
total_price	varchar(20)	
customer_id	bigint	
product_id	bigint	
mrp_price	varchar(20)	

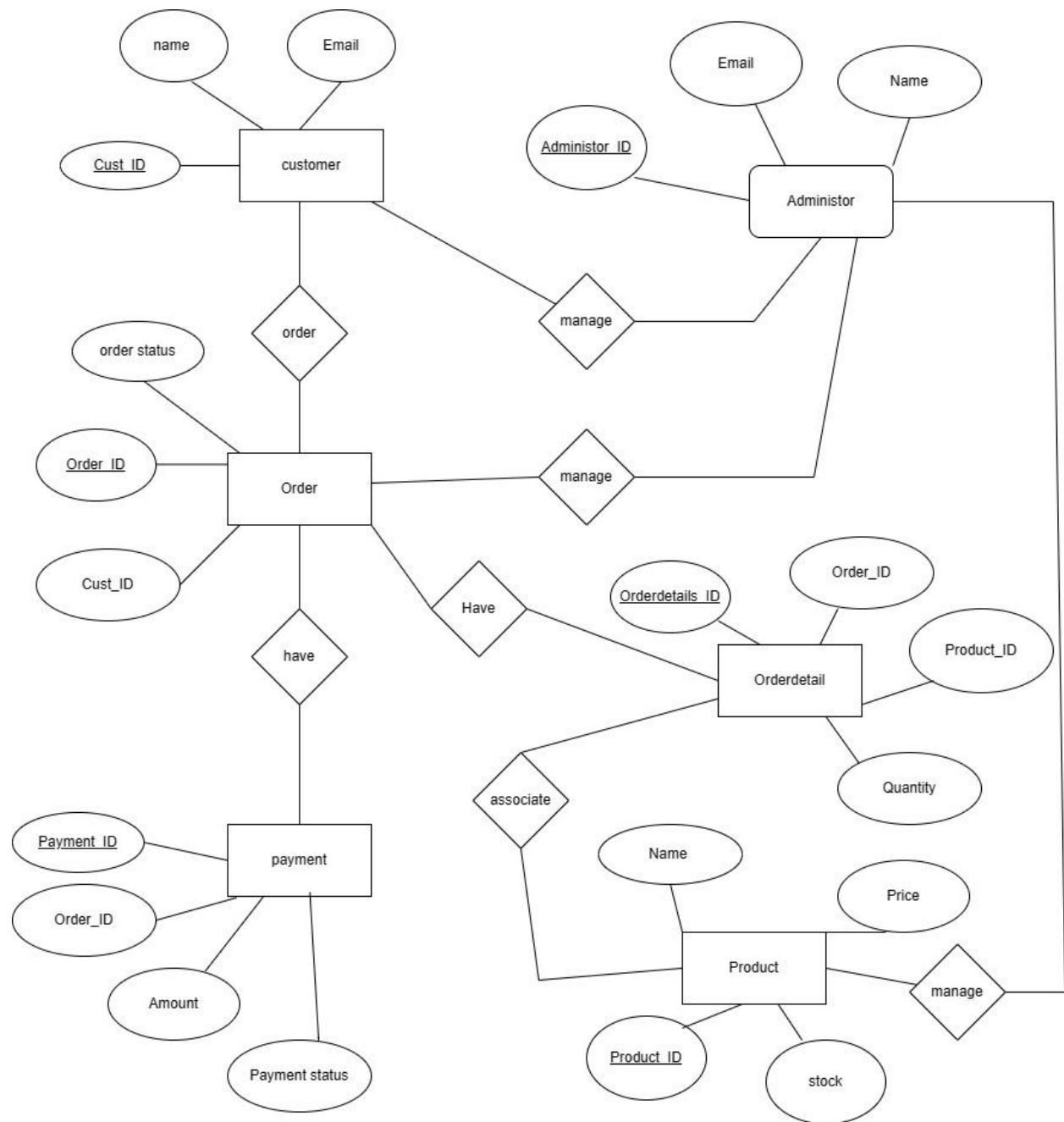
Query Result:

id	discount_price	quantity	total_price	customer_id	product_id	mrp_price
3	400	1	400	5	3	40
5	400	1	400	7	3	40

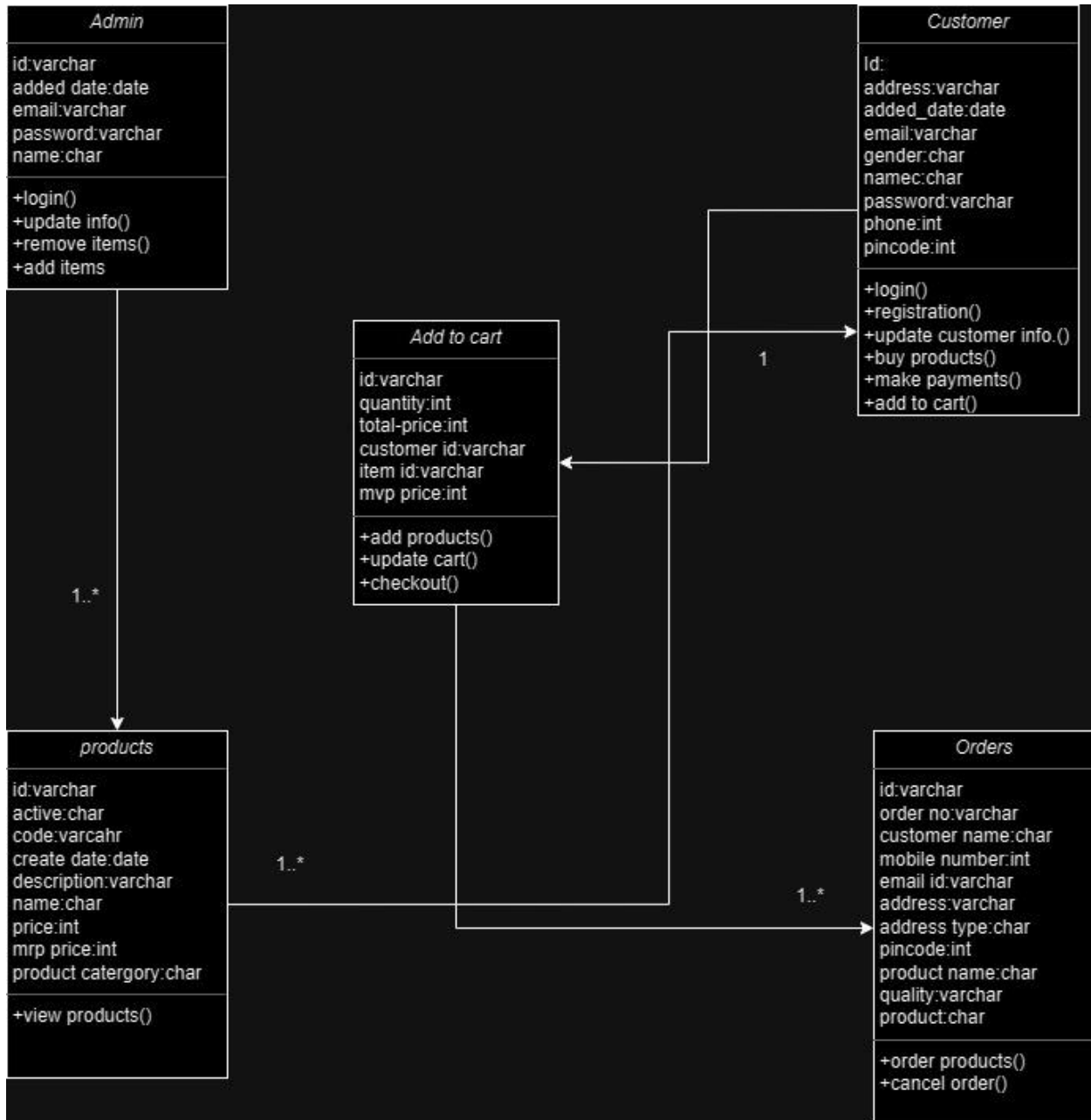
Action Output:

Time	Action	Message	Duration / Fetch
48 19:29:22	SELECT * FROM shoppingssystem.tbladmin LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec
49 19:29:29	SELECT * FROM shoppingssystem.tblcart LIMIT 0, 1000	2 row(s) returned	0.016 sec / 0.000 sec

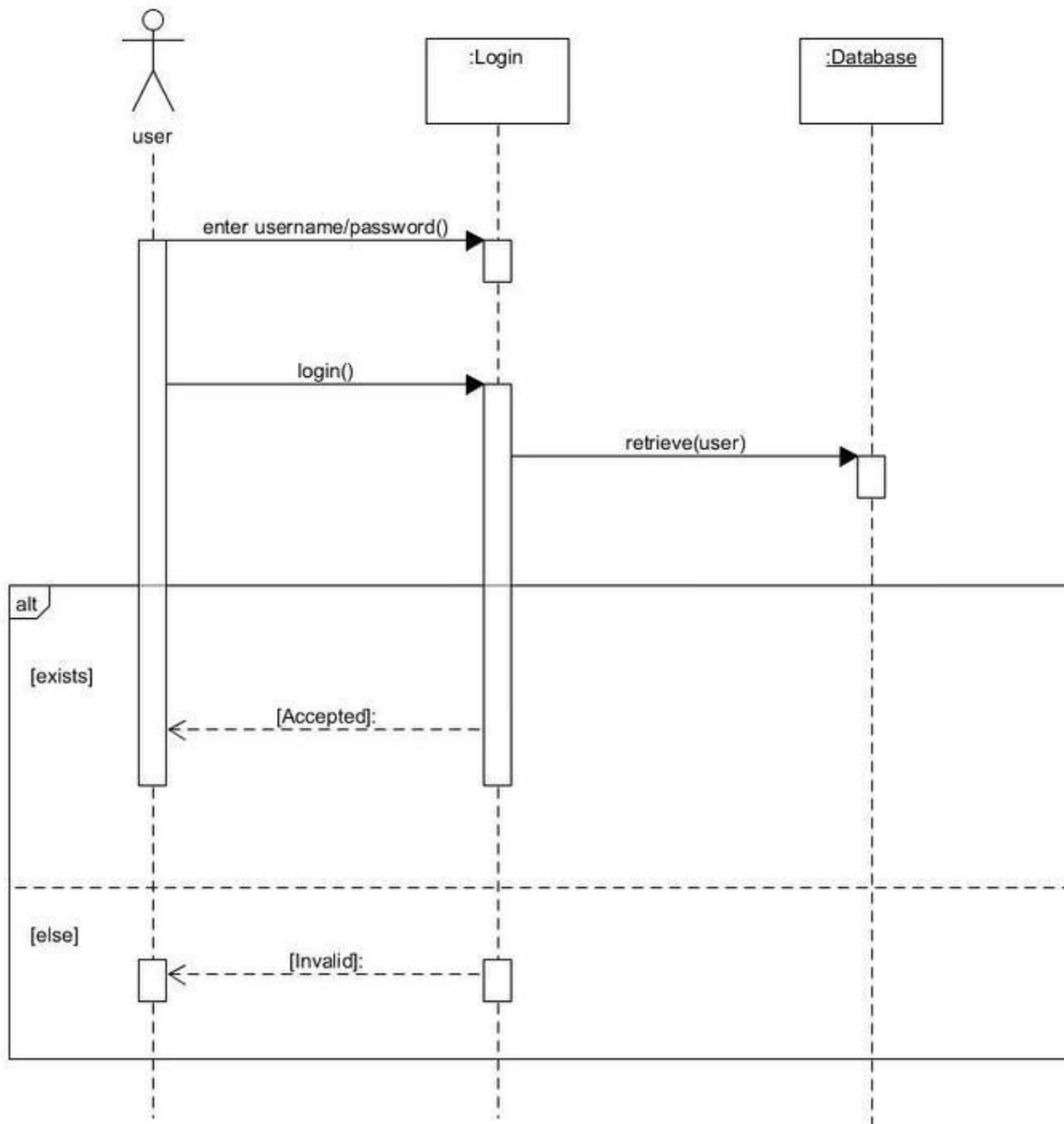
Entity Relationship Diagram.



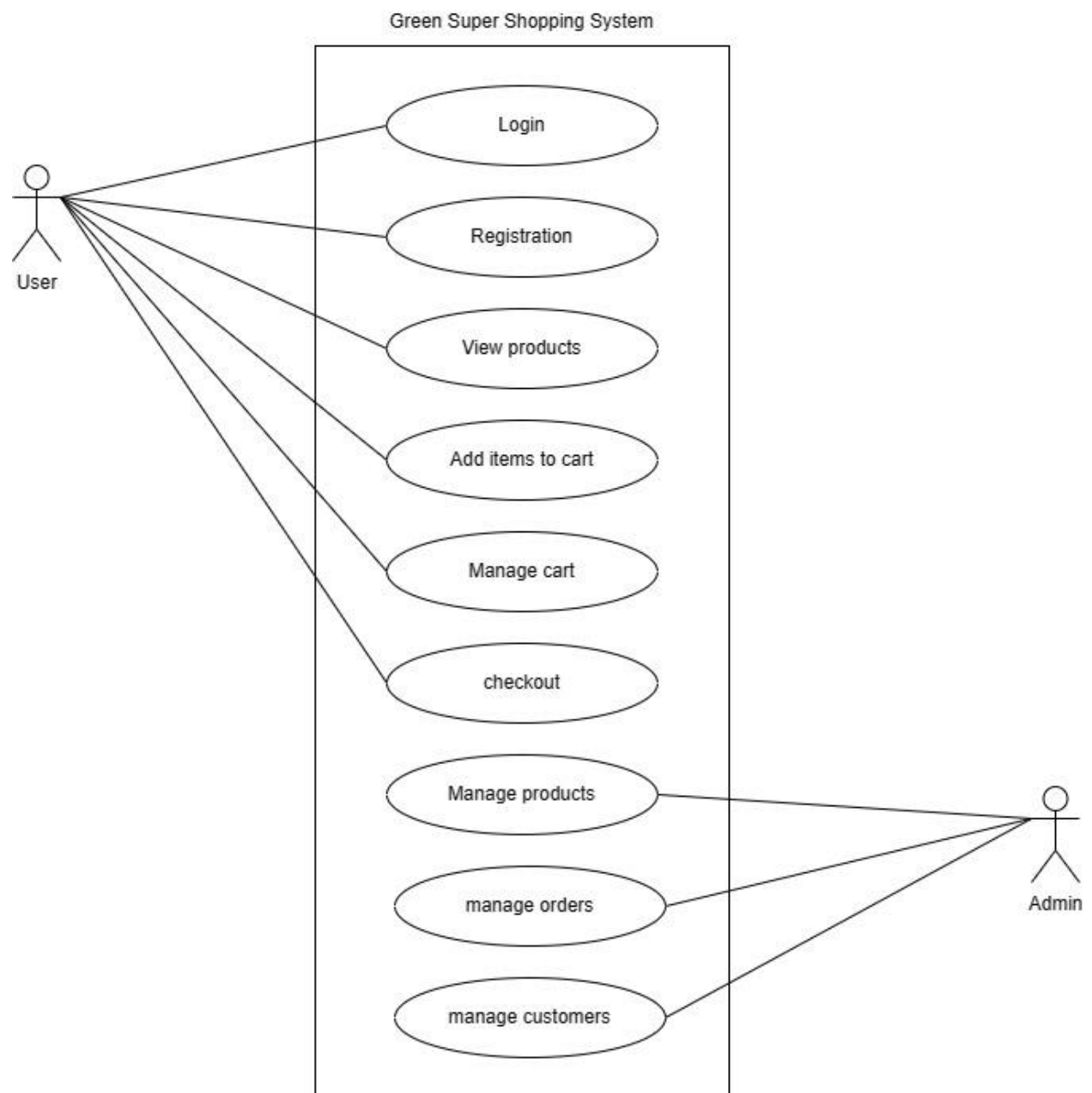
Class Diagram.



Sequence Diagram.



Use case Diagram.



Use case narrations.

- Logging – To proceed with buying products the customer must register and log.
- Registration- If the customer does not sign up on the website, he/she will not be able to buy or add to cart products, to view products it's not mandatory to sign up.
- View products – As mentioned above the user can register and login or the user is free to browse through the products. But to use the add to cart function and checkout the user must log in beforehand.
- Add to cart, manage cart and checkout – After the user adds the products to cart and click the add to cart product the user can see the add to cart page(checkout), there the user is free to remove the products if necessary and proceed to checkouts and pay for the products.
- Admin login – After the administrator or the store manager logs with the admin credentials the admin can view the admin dashboard.
- Manage item products – The admin dashboard contains the necessary tools to add or remove or edit the item products.
- Manage orders – The admin can view the customer information and their orders through view orders and track the item orders and their shipping and delivery details.

References.

- To get the basic understanding of how a e-supermarket system website works we referred some popular supermarket websites,
 - Cargils supermarket - https://cargillsonline.com/Web/Product?IC=NA==&NC=Q29va2luZyBFc3NlbnRpYWxz&utm_source=Google%20Sprig&utm_medium=Google%20Search%20Ads&utm_campaign=Cargills%20online%20cooking%20essentials%20search%20ads&gclid=CjwKCAiA-bmsBhAGEiwAoaQNmq4LKk2aEcYDyeuUjHgN6iKSxp-3HXwAq3IGvNGsRiEVIBUi4sanNRoC9DAQAvD_BwE
 - Sathosa - <https://lankasathosa.lk>