



**INSTITUTE FOR ADVANCED COMPUTING
AND SOFTWARE DEVELOPMENT
AKURDI, PUNE**

Documentation On

“Rent-A-Style”

Ecommerce Store for Renting Clothes

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ACKNOWLEDGEMENT

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ABSTRACT

The growing popularity of online clothing rentals is fueled by the desire to keep up with the latest trends. Buyers all over the world know the product. Customers now prefer the purchase of online clothing due to easy access and the availability of great options at a low price, due to the increase in internet penetration. This also exacerbates the global demand for online rental clothing. The online clothing rental market is expected to grow due to lifestyle changes and popularity of party dresses, designer dresses, and dinner suits. Therefore, product rental will be considered the most sustainable way to use clothing today, as industries use sustainability as their key business plan to attract more customers. Excessive use and indiscriminate disposal of unwanted clothing has become a global problem and many of these items are discarded without purpose. This, in turn, demonstrates the potential for profit for players in the global clothing rental market.

The web-based app is an renting system for clothing product where seller can add product which can be rented. It helps renting of the products through internet by using a website device. Thus, the customer will get the serviceof browsing and getting clothes on rent without investing much money and not worrying about wardrobe stacking. Since this application is available in the Smartphone it is easily accessible and always available

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A. INTRODUCTION

Whenever we need something that we don't have, we go to a store and purchase it. But sometimes, even in the store those items are not available. So we go to a mall to get everything we need, all at once. It's a one stop destination. But what if we can bring the whole mall at your own house? One can do all the shopping they need to, and can check thousands of products without even stepping outside their house. That is the idea which gave birth to the concept of online shopping.

Not only you can get exactly what you want when you shop online, you can also try to get a better deal by browsing across some other online stores. This project "E- Store" is an effort to cater the people by providing them with products of various varieties. From your daily need things to thing you need for your home, all in one place.

From a customer's point of view, they can browse through a catalogue of products, search for products, add products to their cart and place orders. Customers can even create an account and add addresses. They can easily browse products via category feature. Register their account login to their account, update their account, delete their account

From the admin's point of view, the admin can view seller details, customer details, order details and can also delete customer and seller accounts if needed. Register their account login to their account, update their account, delete their account. From the seller's point of view, they can add a product, update the product, new sellers can register their account, login to their account, update their account details and delete their account.

2. PRODUCT OVERVIEW AND SUMMARY

2.1. PURPOSE

Our project, “Rent-A-Style”, is a web-based online e-commerce website which aims to provide users with an easy to navigate and visually appealing medium to browse through a catalogue of products and shop for the products they desire.

2.2. SCOPE

“Rent-A-Style” aims to deliver a web-based application that hosts a wide collection of products that users can browse through. Users can add products to cart and place orders for each product. They can update their profile, add delivery address and add payment details.

They can view their current order as well. Seller can manage various product details like price, adding new products, updating existing products etc.

This project does not support the actual logistics and delivery of product and actual payment logic. We are assuming that the organization that implements it will be using third-party payment API which can easily be integrated in our application if needed.

Rent-A-Style is only an interface for both customers (for browsing and shopping for products) and sellers (for managing products).

2.3. OVERVIEW

A. TECHNOLOGIES USED

- FRONT END
 - a. Bootstrap v5.0
 - b. React 17.0.1
- BACK END
 - a. Spring Boot v2.2.1
- DATABASE MANAGEMENT SYSTEM
 - a. MySQL 8.0

B. FEATURES PROVIDED

- FOR CUSTOMERS
 - a. Browse – Customers can browse the homepage to explore the entire collection of products available.
 - b. View– When a customer checks product details, they can also view the details.
 - c. Register, Login & Logout – New customers can register on the site. Existing customers can then login to access their account information and logout when the account is not in use.
 - d. View & Update Profile – When logged in, customers can view their profile and update their details.
 - e. Add to Cart & Place Orders – If customers find products that they like, they can save the products in the cart until they decide to purchase it. When they wish to purchase it, they can place orders for those products by selecting a delivery address.

- f. View Order Details – Every customer can view their order history in order to get an idea about their past spendings and how much they saved on each order.

➤ FOR SELLER

- a. Register, Login & Logout – Similar to customers, sellers can register their account, login & logout to access their account.
- b. Delete Product –The seller can delete a product if they need to for any purpose.
- c. Add New products –seller can add new products with all the necessary details like product name, brand, category, price, etc.
- d. Update product Details – Often, the details of a product such as the price, may change over time. In such cases, the seller can update those product details to reflect the change on the application.

➤ FOR ADMIN

- a. Login & Logout – Similarly admin can login & logout to access their account.
- b. Delete customer and seller – The admin can delete a customer or seller if they need to for any purpose.
- c. Admin can also view order history.
- d. Admin can also update details like password

2.4. FEASIBILITY STUDY

Feasibility is the determination of whether a project is worth undertaking or not. Before actually recommending the new system, it is important to investigate if it is feasible to develop it. Before developing and implementing a system, we have to make sure that the system is feasible in the following ways:

B. TECHNICAL FEASIBILITY

In this type of feasibility study, the system analyst has to check whether it is possible or not to develop the requested system with the available manpower, software, hardware, etc. This project makes use of cross-platform software and solutions like Java, and hence can run on any operating system. React, used in front-end, is swift and light weight framework when it comes to delivering the requested page as it doesn't reload the entire page for every HTTP request. It only re-renders the components that need to fetch new data. Also, as React is modular in nature, it is easy to develop new components and scale up existing components in order to add new features to the system.

The combination of Spring Boot for backend makes for a fast, easy to set-up and reliable system to interact with the database, as they are secure and transactional in nature. Since the sensitive data of customers and admins need to be stored in a robust and secure database, MySQL database management system was chosen as it is an industry standard.

C. OPERATIONAL FEASIBILITY

In this type of feasibility study, the operation of the system is considered. An analysis is performed on whether it is feasible for the user department to use the application. Thus, the proposed system is said to be operationally feasible only if clients are able to understand the system clearly and correctly, and can use it with ease.

In the design of this project, we always kept user experience in mind. We made an effort to have a good user interface with consistent theme and alluring design to keep the users interested and engaged. In our project, the use of universally known icons and instructions that are easy to understand makes sure that the user will not need any special technical know-how to use the application. We made sure that the information available throughout the application is arranged in a logically coherent and consistent manner, guaranteeing that the users will have a smooth and effortless experience and even enjoy using the application.

3.REQUIREMENTS FULFILLED

3.1 FUNCTIONAL REQUIREMENTS

Following are the functional requirements fulfilled by our project:

- Customers can browse through all available products.
- Customers can place orders for products and view their order history.
- Sellers can manage various product details like product price, adding new products, etc.
- Sellers can update the product details.
- Sellers can update their account details and delete their account if needed.
- Admins can delete customers and sellers if the need arises.
- Admins can view all the orders placed by the customers.

3.2 NON-FUNCTIONAL REQUIREMENTS

Following are the non-functional requirements fulfilled by our project:

- Since the application uses lightweight and established software components that are also cross-platform, it is remarkably performant and has good support for every operating system.
- The use of React for front end and Spring Boot for back end delivers quick response times to admins and customers alike.
- Card-style UI and well-known icons and symbols used throughout the application provides a consistent theme and user-friendly interface that anyone can grasp easily, even without a technical background.

4. PROJECT DESIGN

4.1. DATA MODEL

The following tables depict the database design used for “Rent-A-Style” application:

❖ Tables Related to User Details

	Field	Type	Null	Key	Default	Extra
▶	address_id	int	NO	PRI	NULL	auto_increment
	city	varchar(255)	YES		NULL	
	country	varchar(255)	YES		NULL	
	state	varchar(255)	YES		NULL	
	zip	varchar(255)	YES		NULL	

4.1.1 Addresses Table

	Field	Type	Null	Key	Default	Extra
▶	admin_id	varchar(255)	NO	PRI	NULL	
	admin_password	varchar(255)	YES		NULL	
	admin_name	varchar(255)	YES		NULL	

4.1.2 Admin Table

	Field	Type	Null	Key	Default	Extra
▶	customer_id	int	NO	PRI	NULL	auto_increment
	city	varchar(255)	YES		NULL	
	created_timestamp	date	YES		NULL	
	gender	varchar(255)	YES		NULL	
	customer_name	varchar(255)	YES		NULL	
	customer_phoneNo	varchar(255)	YES		NULL	
	customer_password	varchar(255)	YES		NULL	
	customer_emailID	varchar(255)	YES		NULL	

4.1.3 Customers Table

	Field	Type	Null	Key	Default	Extra
▶	order_details_id	int	NO	PRI	NULL	auto_increment
	order_quantity	int	YES		NULL	
	order_id	int	YES	MUL	NULL	
	product_id	int	YES	MUL	NULL	

4.1.4 Order Details Table

	Field	Type	Null	Key	Default	Extra
▶	order_id	int	NO	PRI	NULL	auto_increment
	order_date	date	YES		NULL	
	address_id	int	YES	MUL	NULL	
	customer_id	int	YES	MUL	NULL	
	payment_id	int	YES	MUL	NULL	

4.1.5 Orders Table

	Field	Type	Null	Key	Default	Extra
▶	payment_id	int	NO	PRI	NULL	auto_increment
	amount	int	YES		NULL	
	card_no	varchar(255)	YES		NULL	
	name_on_card	varchar(255)	YES		NULL	
	payment_date	datetime(6)	YES		NULL	

4.1.6 Payments Table

	Field	Type	Null	Key	Default	Extra
▶	seller_id	int	NO	PRI	NULL	auto_increment
	city	varchar(255)	YES		NULL	
	created_timestamp	date	YES		NULL	
	seller_name	varchar(255)	YES		NULL	
	seller_phoneNo	varchar(255)	YES		NULL	
	seller_password	varchar(255)	YES		NULL	
	seller_emailID	varchar(255)	YES		NULL	

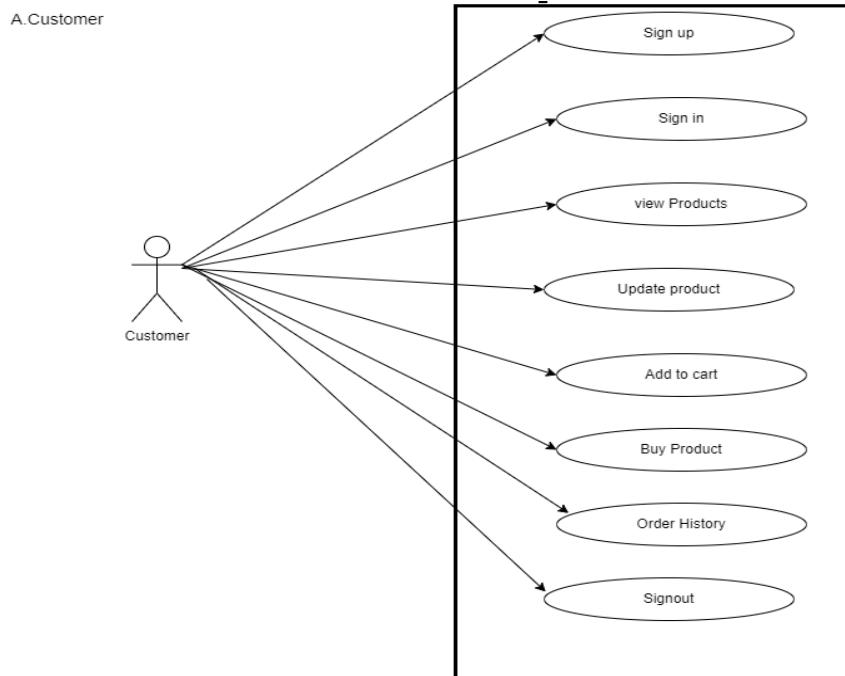
4.1.7 Seller Table

	Field	Type	Null	Key	Default	Extra
▶	product_id	int	NO	PRI	NULL	auto_increment
	product_brand	varchar(255)	YES		NULL	
	created_timestamp	date	YES		NULL	
	product_category	varchar(255)	YES		NULL	
	product_photo	varchar(255)	YES		NULL	
	product_name	varchar(255)	YES		NULL	
	product_price	int	YES		NULL	
	product_subcategory	varchar(255)	YES		NULL	
	seller_id	int	YES	MUL	NULL	

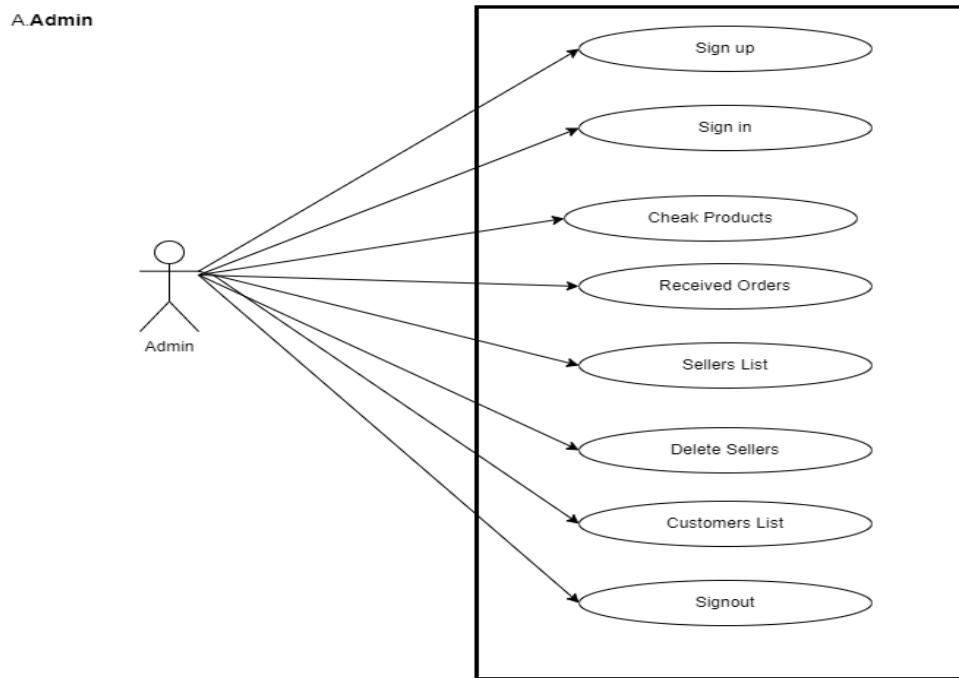
4.1.8 Products Table

4.2.USE CASE DIAGRAM

A. Customer

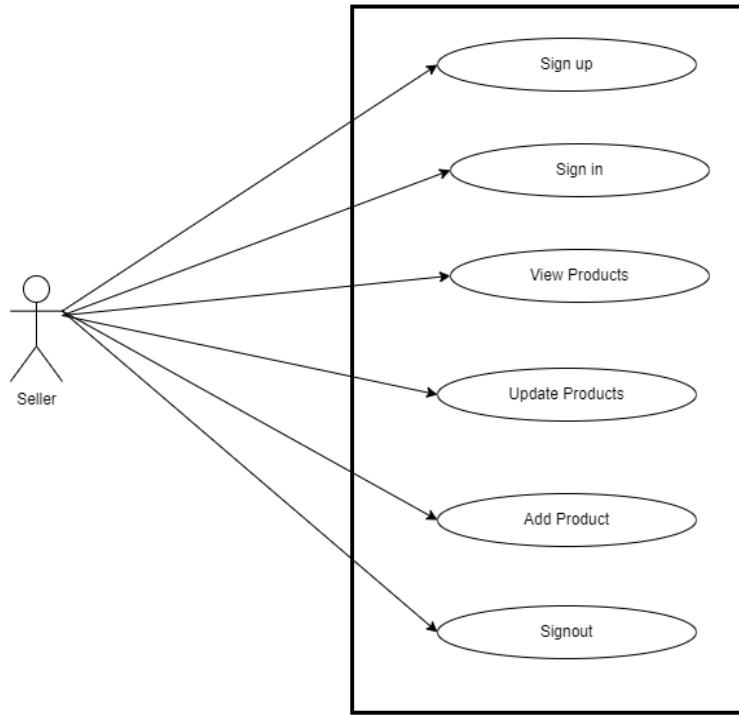


D. Admin



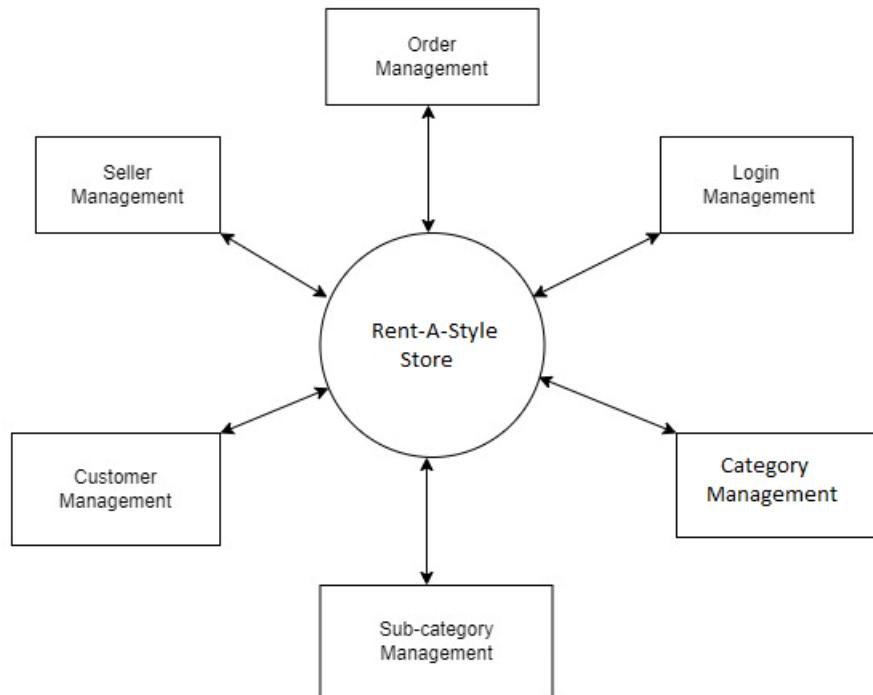
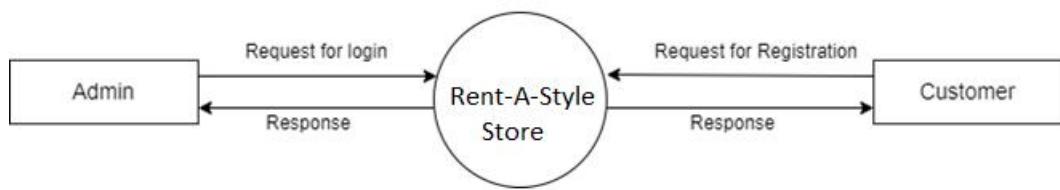
C.SELLER

B.Seller



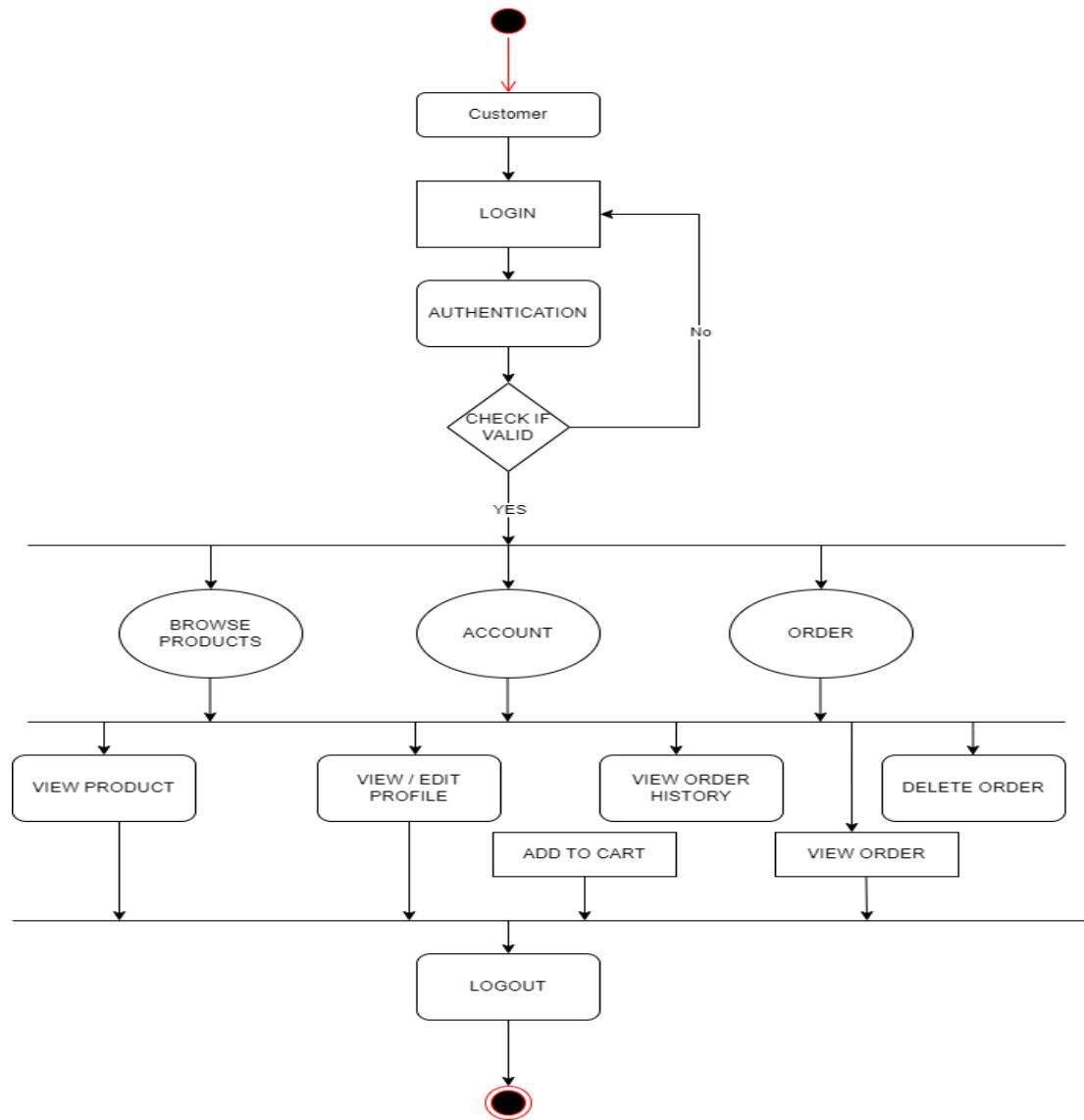
4.3. DFD DIAGRAM

ZERO LEVEL DFD

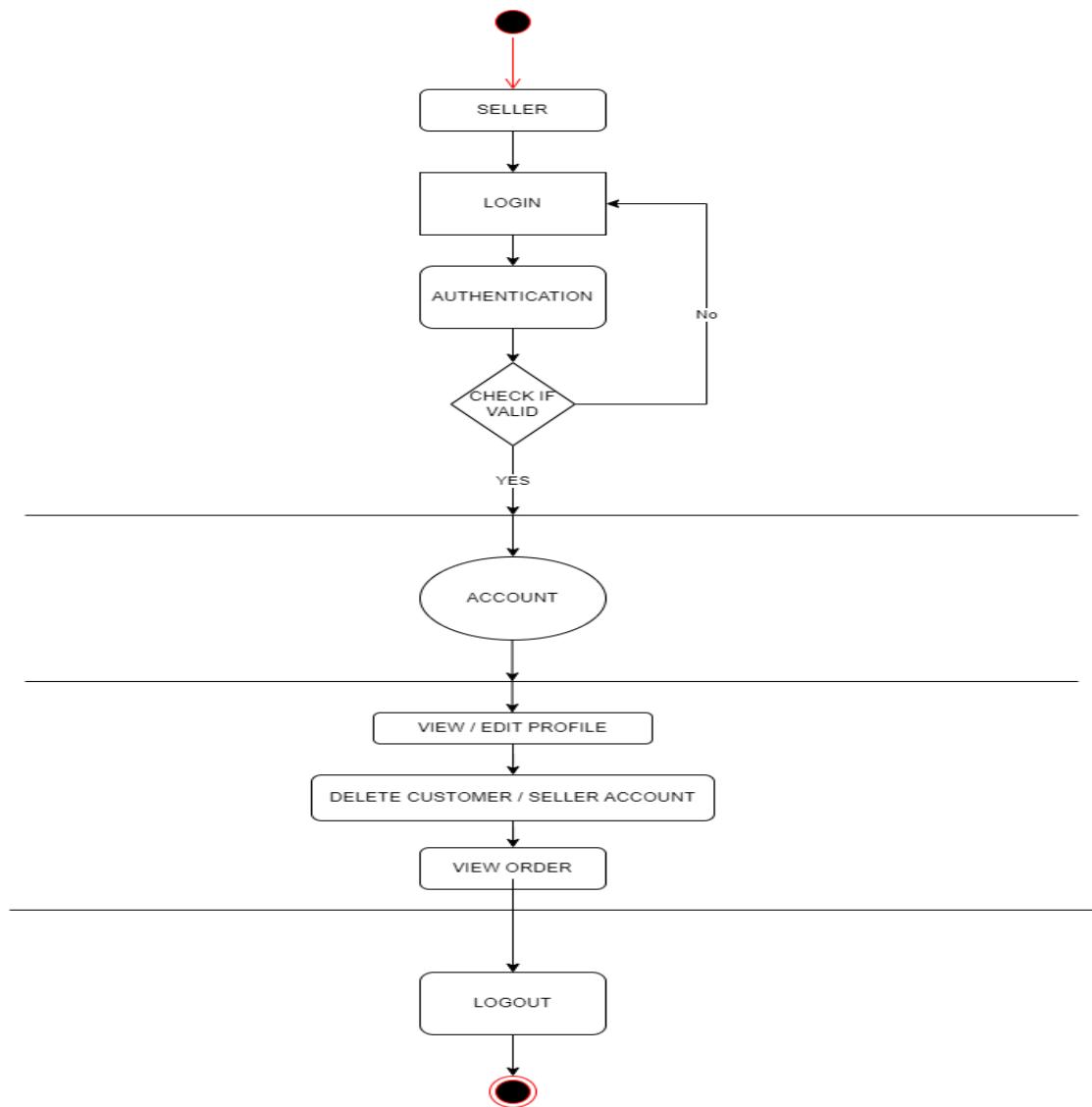


4.4. ACTIVITY DIAGRAM

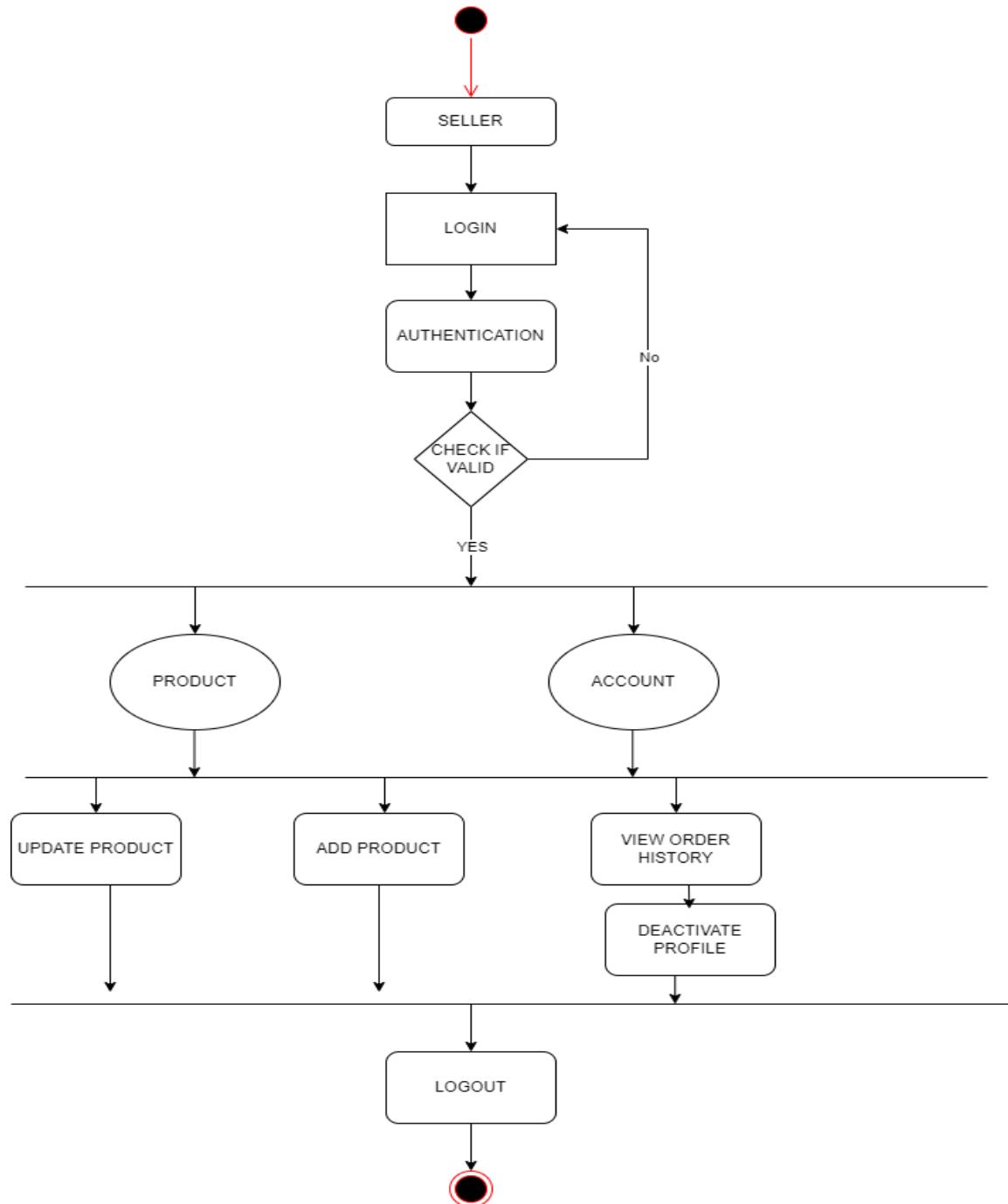
A. Customer



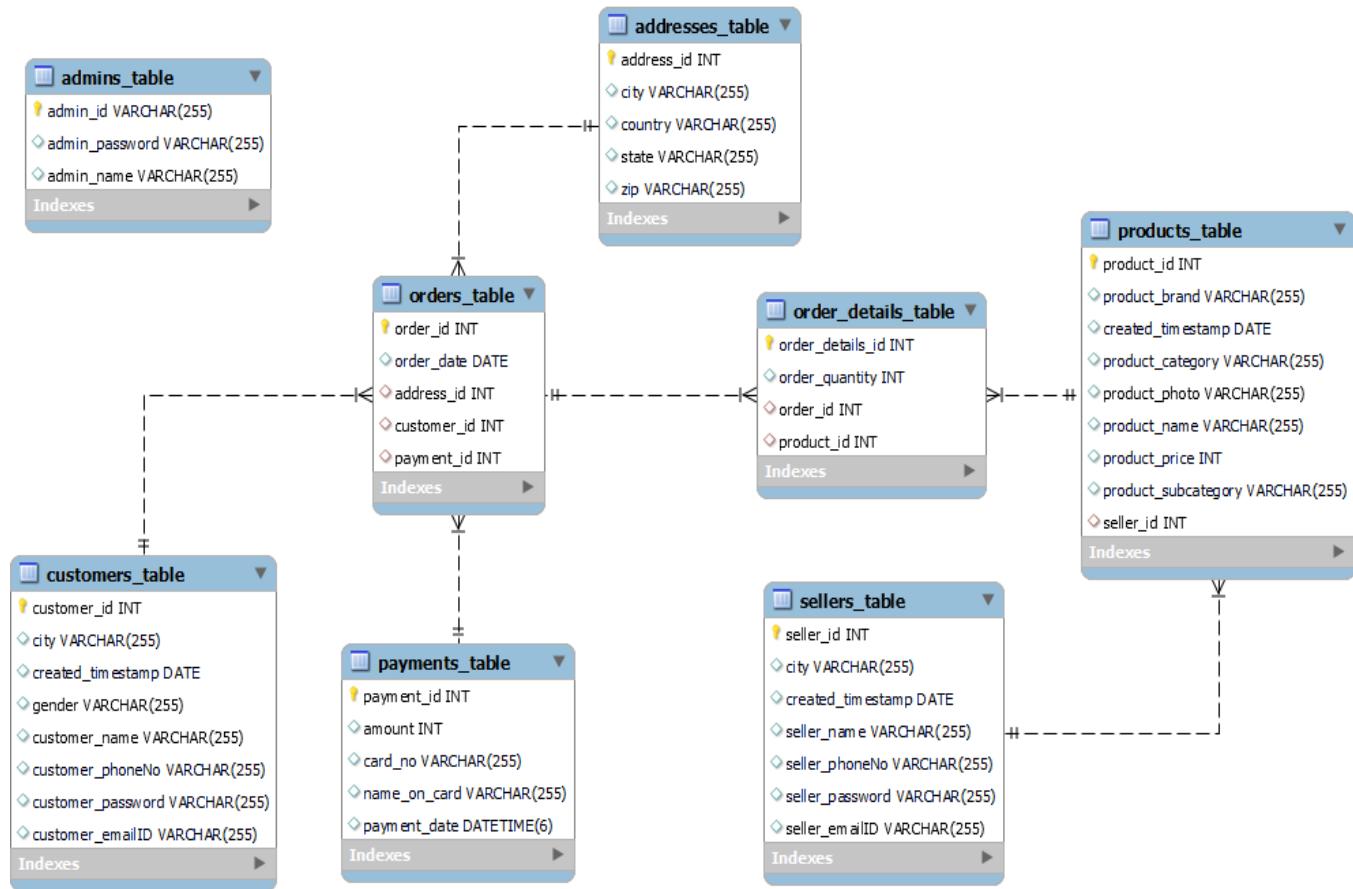
E.Admin



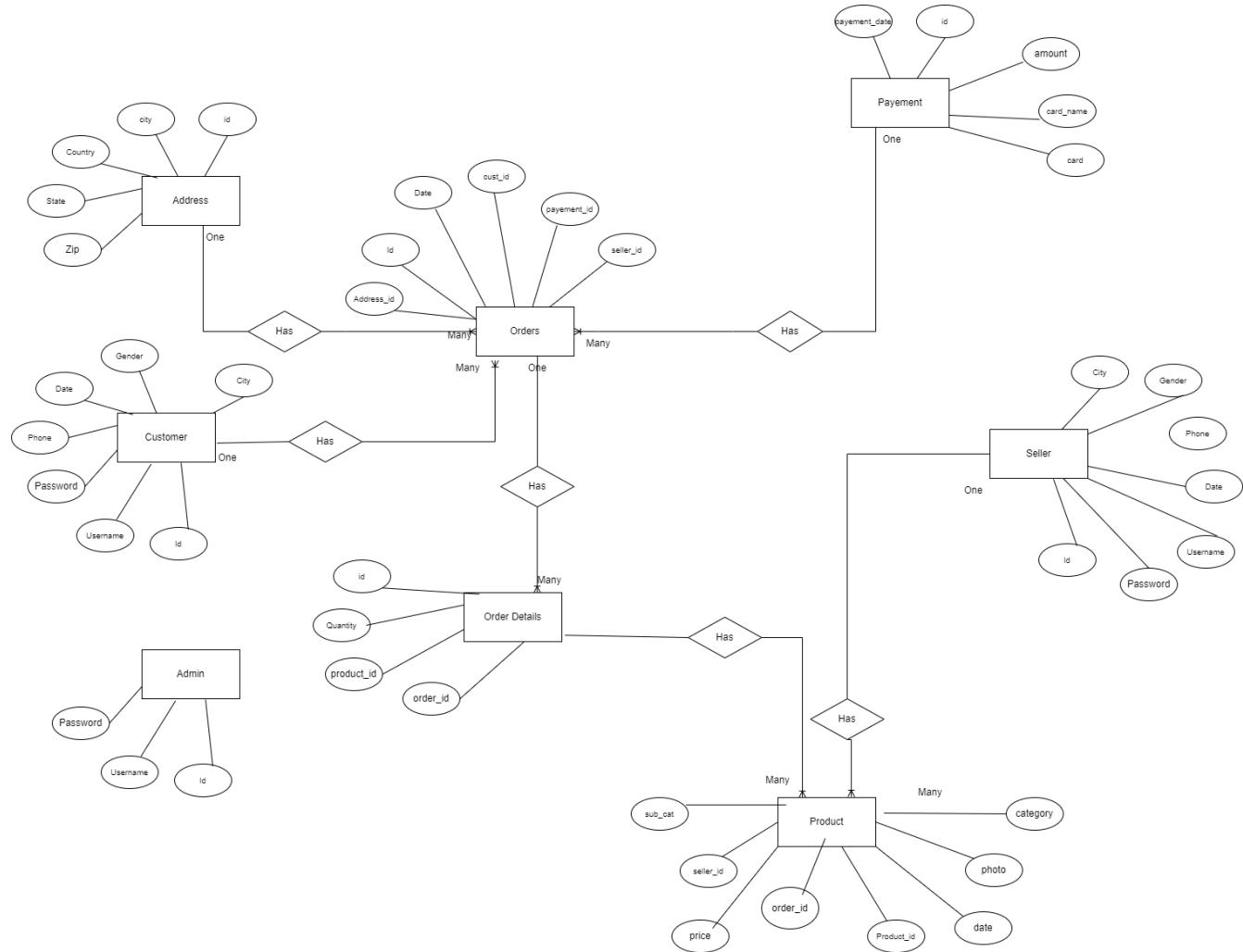
C.SELLER



4.5.ER DIAGRAM

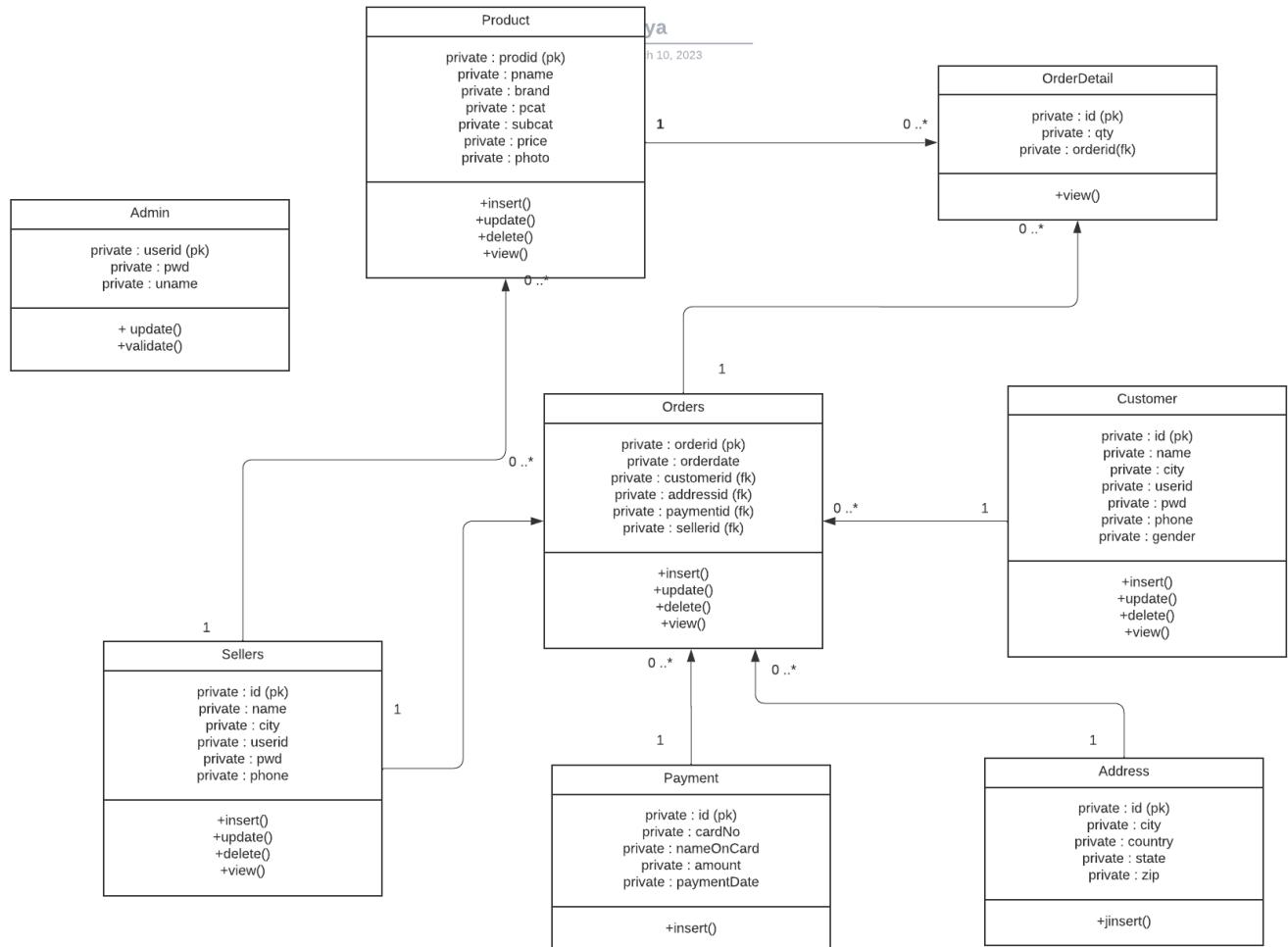


System Generated



Manual

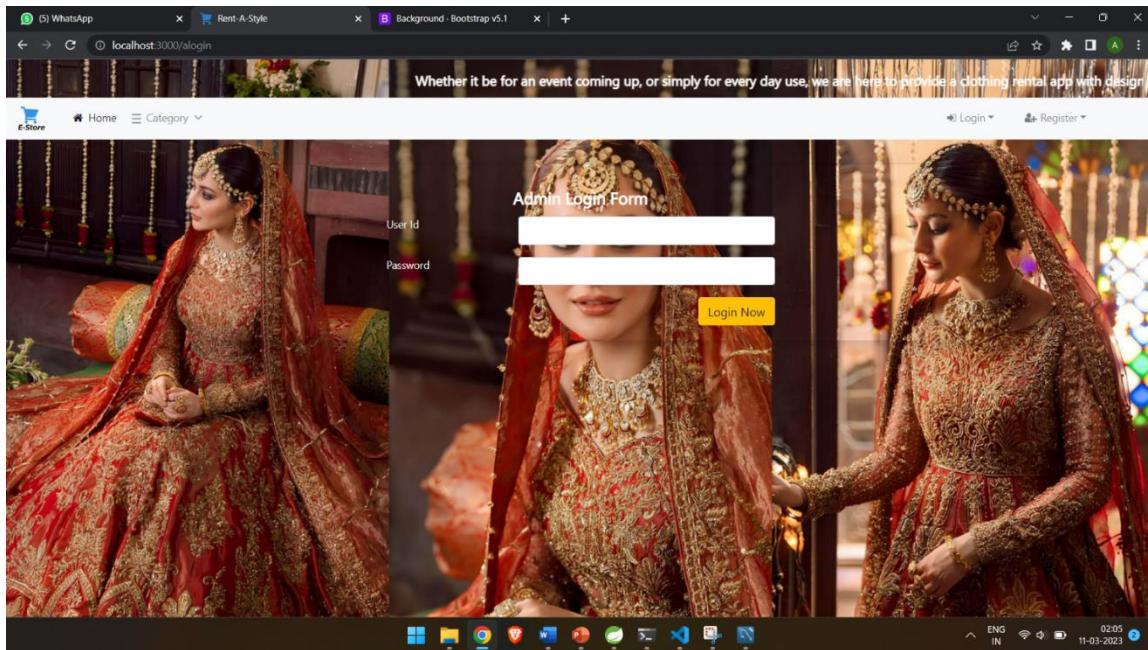
4.6.CLASS DIAGRAM



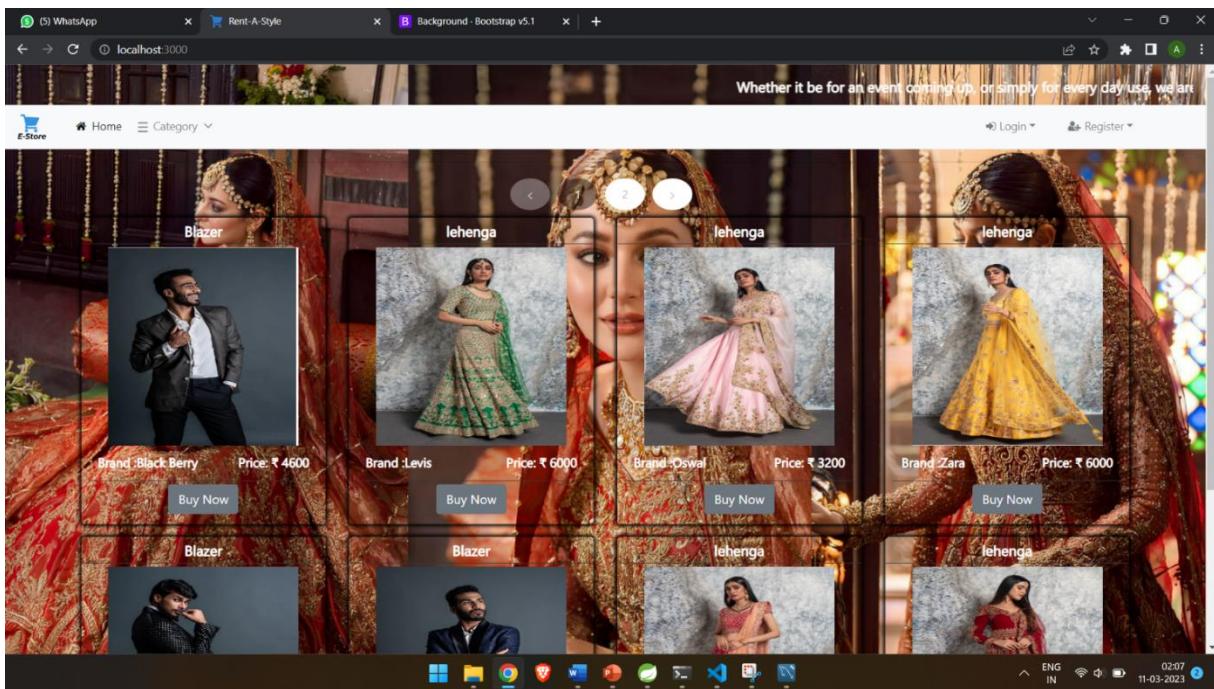
5. PROJECT SCREENSHOTS

5.1.CUSTOMER

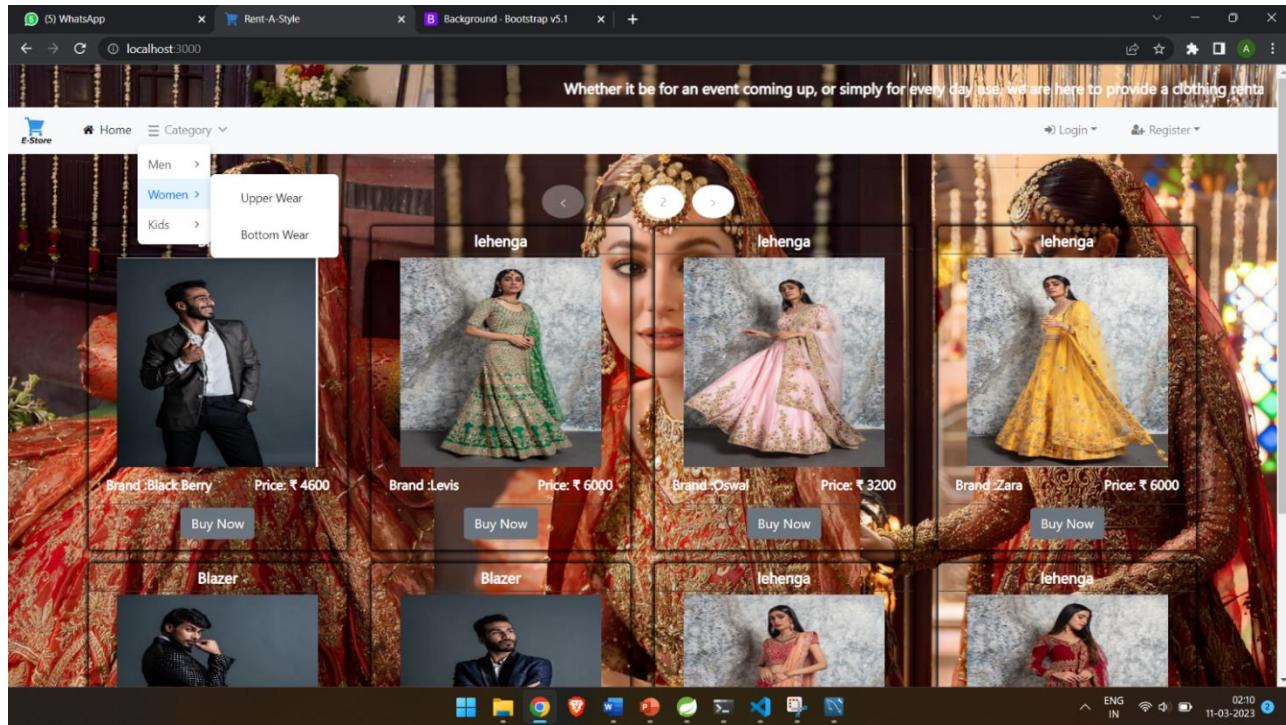
➤ Login



➤ Home Page



➤ Categories



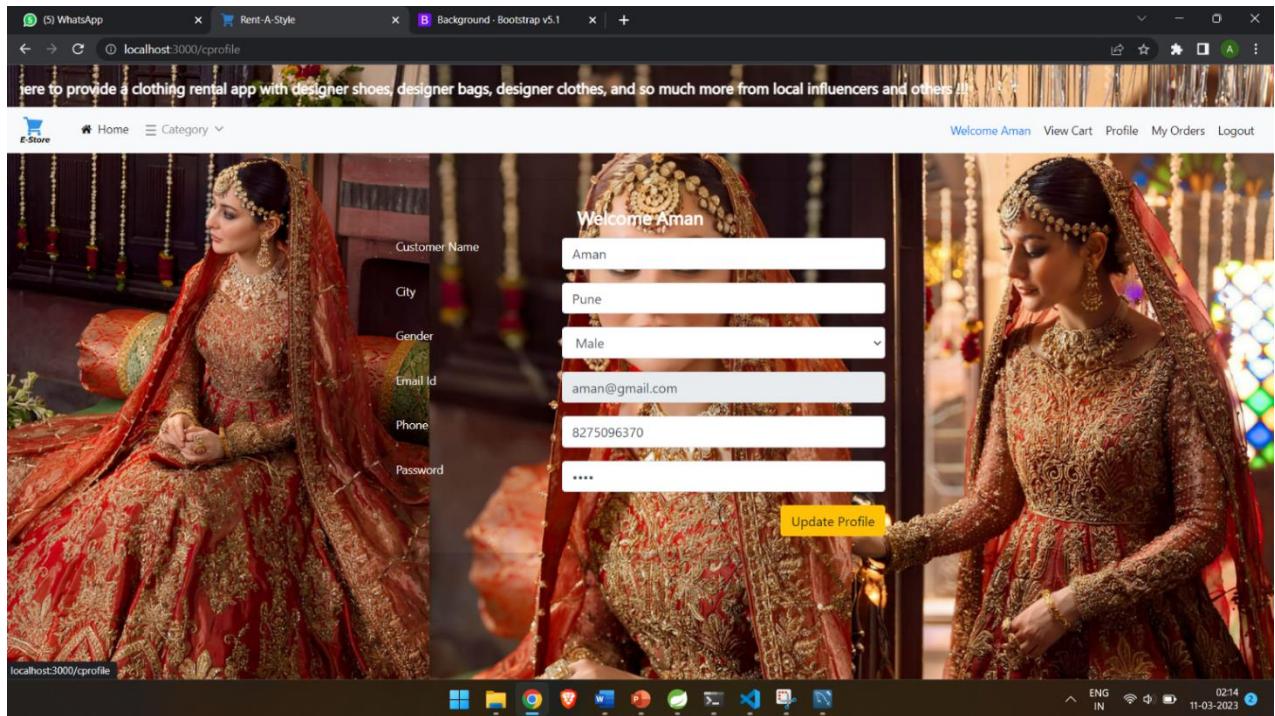
➤ Order Details

The screenshot shows a web browser window for 'localhost:3000/myorders'. At the top, there's a navigation bar with links for Home, Category, Welcome Aman, View Cart, Profile, My Orders, and Logout. Below the navigation, a heading says 'My Purchased Orders'. A table lists the first order: Order Id 1, Order Date Fri, 10-Mar-2023, and Amount ₹ 11500. A 'Show Details' button is next to the table. To the right, a detailed view of the order shows two items: a Blazer (Category: Men, Brand: Styarams, Price: ₹ 4500, Quantity: 1) and a lehenga (Category: Women, Brand: Raymonds, Price: ₹ 3500, Quantity: 2). The background of the page features a large image of a woman in a red lehenga. The bottom right corner shows a taskbar with various application icons and the system clock.

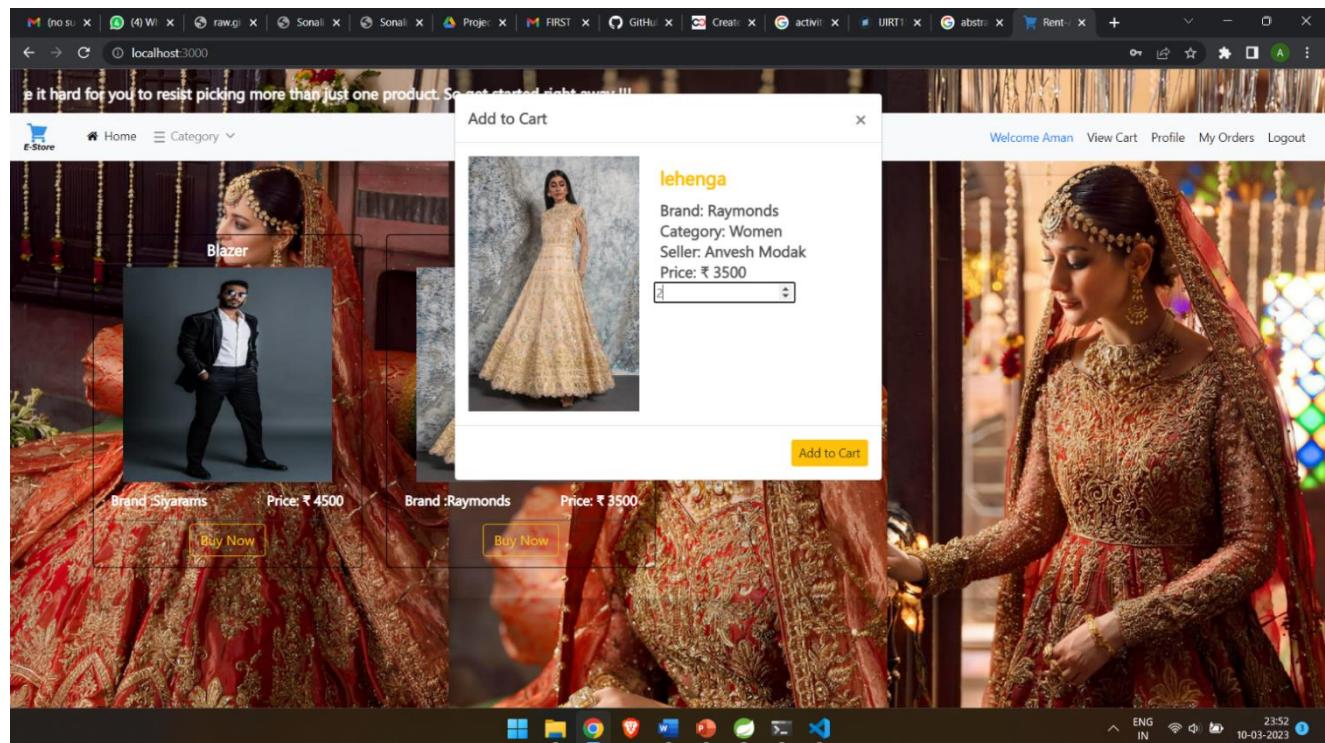
Order Id	Order Date	Amount	Action
1	Fri, 10-Mar-2023	₹ 11500	Show Details

Product Id	Photo	Product	Price	Quantity
2		Blazer Category: Men Brand: Styarams	₹ 4500	1
1		lehenga Category: Women Brand: Raymonds	₹ 3500	2

➤ Customer Profile



➤ Add to Cart



➤ Cart View

Welcome !!! We have a Great News for You !!! The festive season is right around the corner and that can only mean one thing: discounts, discounts and discounts. Renovate your home and get ready to host the most memorable party of the year.

E-Store Home Category Welcome Aman View Cart Profile My Orders Logout

Product Id	Product Photo	Product Name	Price	Quantity	Amount	Action
2		Blazer	₹ 4500	1	₹ 4500	<button>Delete</button>
1		lehenga	₹ 3500	2	₹ 7000	<button>Delete</button>
						Total Amount ₹ 11500

Address Information

City: _____
State: Delhi
Zip: 12324
Country: India

Payment Information

Card No: 1212444433336666
Name on Card: Test Name
Expire Date: _____/_____
CV: 123
Billed Amount: ₹ 11500

Place Order

5.2.ADMIN

➤ Admin login

Whether it be for an event coming up, or simply for every day use, we are here to provide a clothing rental app with designer shoes, designer bags, designer clothes, and so much more from

E-Store Home Category Login Register

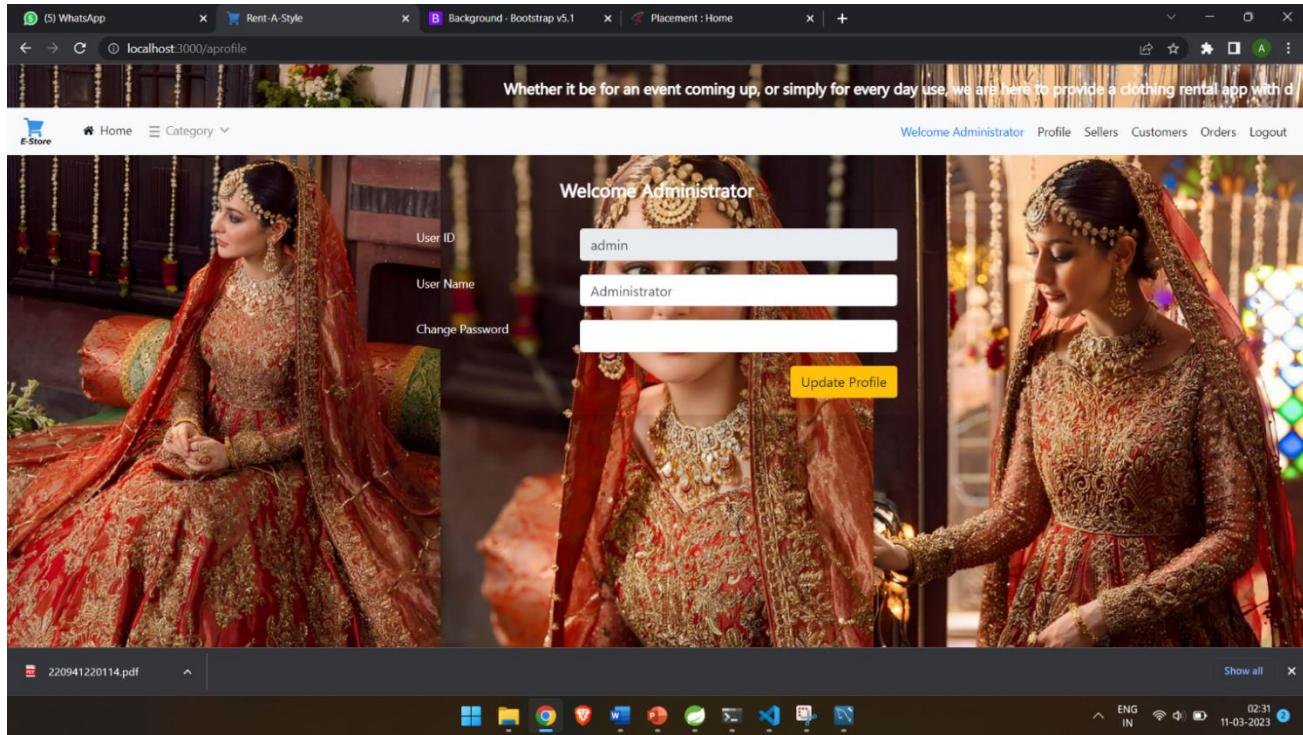
User Id: admin
Password: *****

Admin Login Form

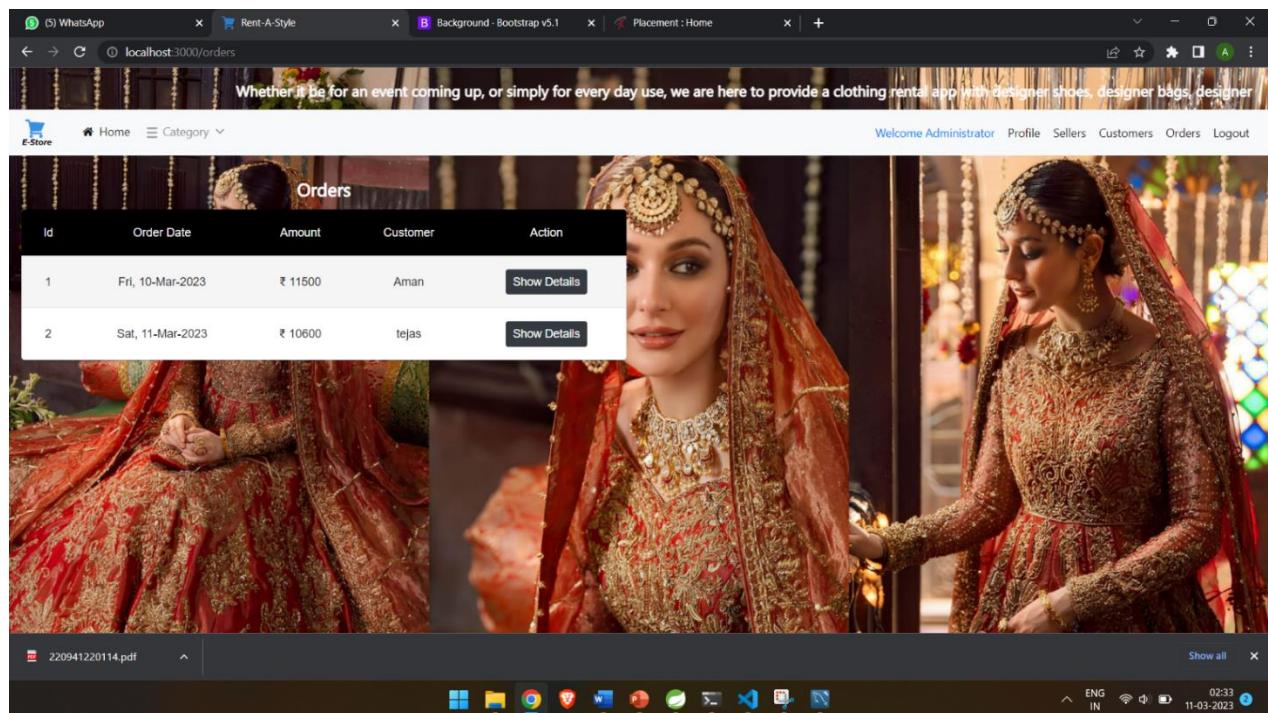
Login Now

220941220114.pdf Show all

➤ Admin Profile



➤ Admin Viewing Order Details



➤ Admin Customer Tab

The screenshot shows a web browser window titled "localhost:3000/customers". The page header includes a logo, navigation links for Home, Category, Welcome Administrator, Profile, Sellers, Customers, Orders, and Logout. The main content area is titled "All Customers" and displays a table with the following data:

Name	City	Gender	Phone	User Id	Password
Aman	Pune	Male	8275096370	aman@gmail.com	aman
tejas	mumbai	Male	8830432146	tejas@gmail.com	tejas

Below the table, there are three large images of women in traditional Indian lehengas. At the bottom of the page, there is a PDF download link labeled "220941220114.pdf" and a system status bar showing "Show all", "ENG IN", "02:33", "11-03-2023", and a battery icon.

➤ Admin Seller Tab

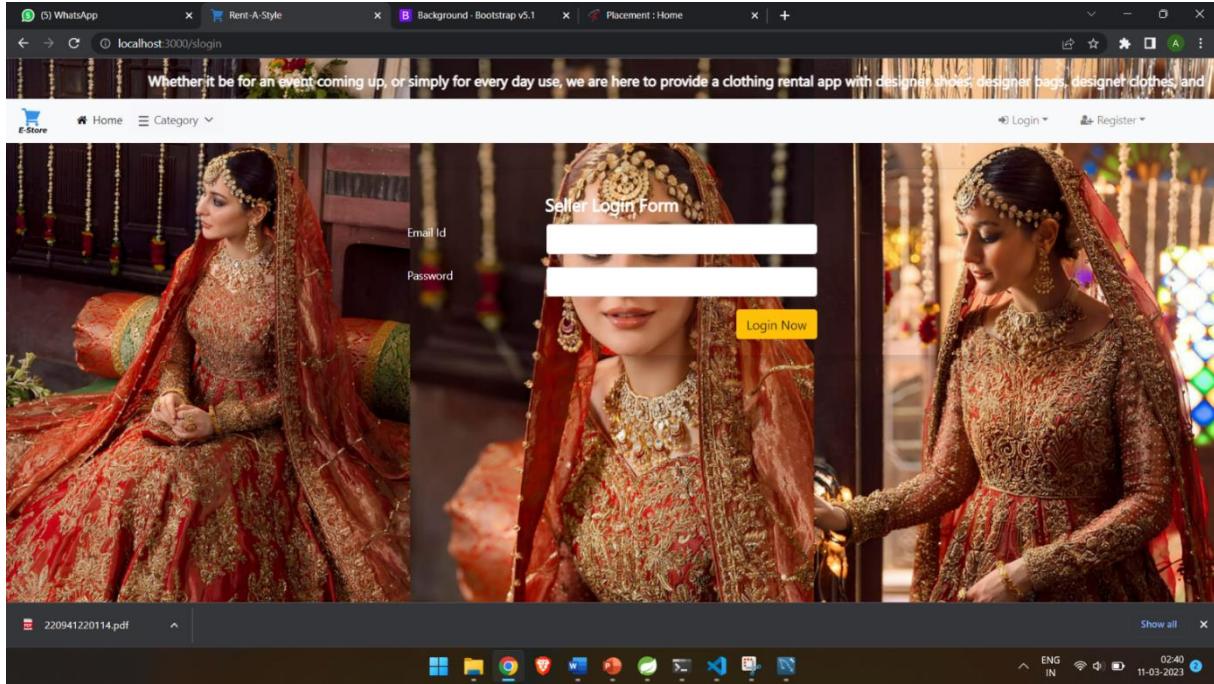
The screenshot shows a web browser window titled "localhost:3000/sellers". The page header includes a logo, navigation links for Home, Category, Welcome Administrator, Profile, Sellers, Customers, Orders, and Logout. The main content area is titled "All Sellers" and displays a table with the following data:

Id	Name	City	Phone	User Id	Password	Action
1	Anvesh Modak	Pune	9834516318	anvesh@gmail.com	anvesh	<button>Delete</button>
2	Piyush Sendurse	Vardha	9404053276	piyush@gmail.com	piyush	<button>Delete</button>
3	rutvik	Amravati	9834109631	rutvik@gmail.com	rutvik	<button>Delete</button>

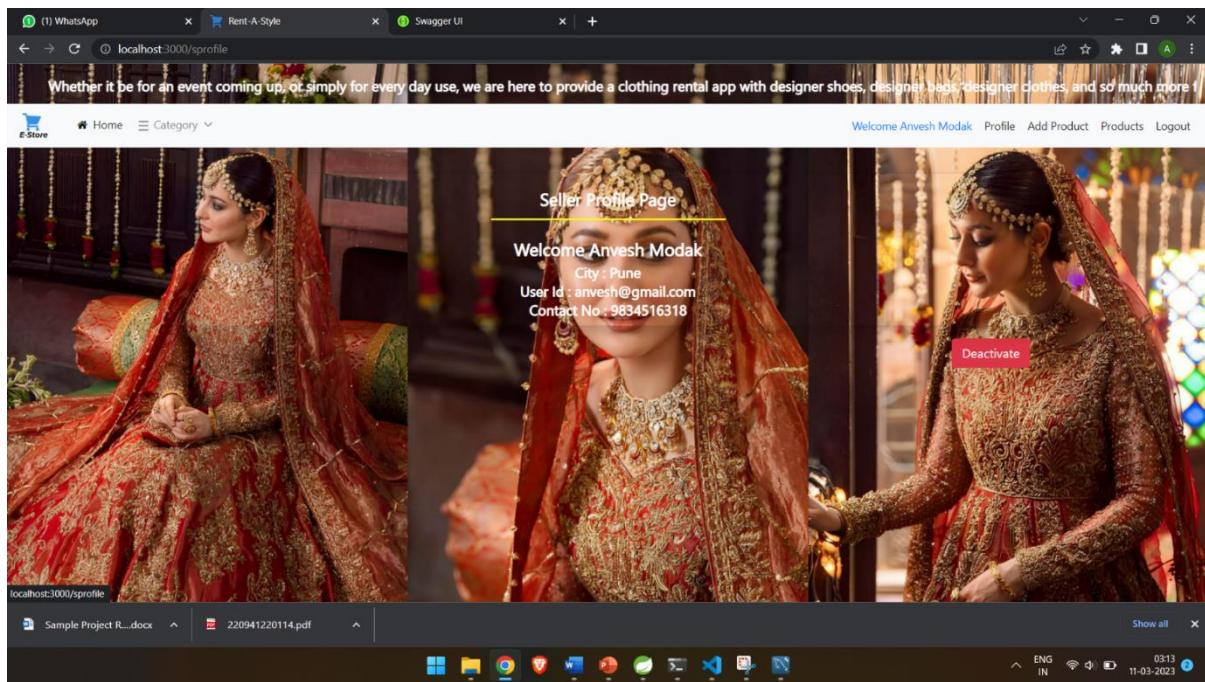
Below the table, there are three large images of women in traditional Indian lehengas. At the bottom of the page, there is a PDF download link labeled "220941220114.pdf" and a system status bar showing "Show all", "ENG IN", "02:34", "11-03-2023", and a battery icon.

5.3.SELLER

➤ Seller Login



➤ Seller Profile



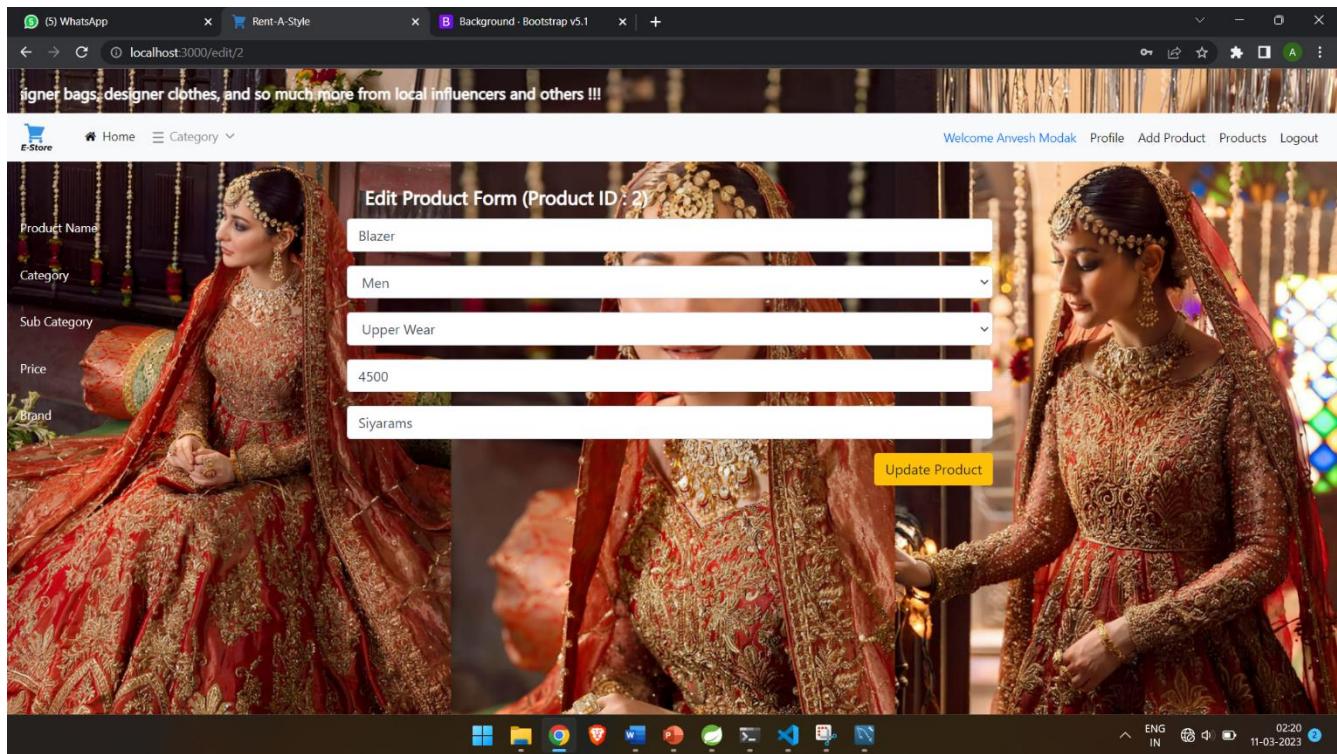
➤ Products List Seller

Name	Category	Sub Category	Brand Name	Price	Action
Blazer	Men	Upper Wear	Shyarams	₹ 4500	<button>Edit</button> <button>Delete</button>
lehenga	Women	Upper Wear	Raymonds	₹ 3500	<button>Edit</button> <button>Delete</button>

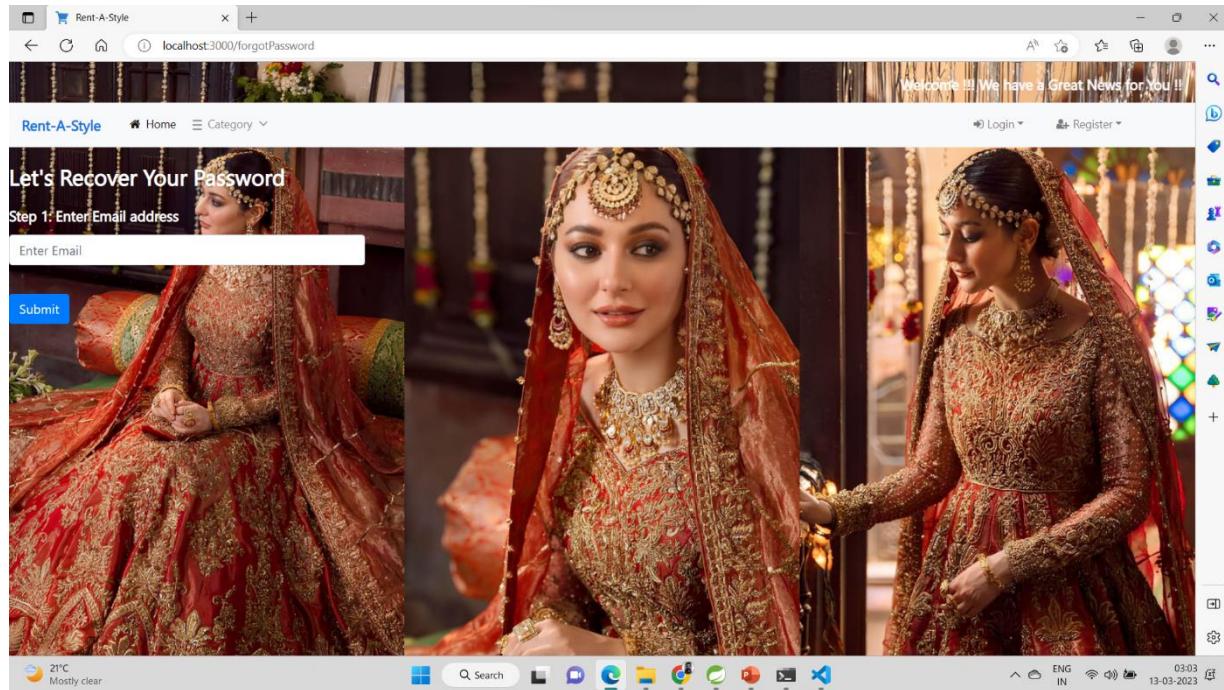
➤ Add Product Form

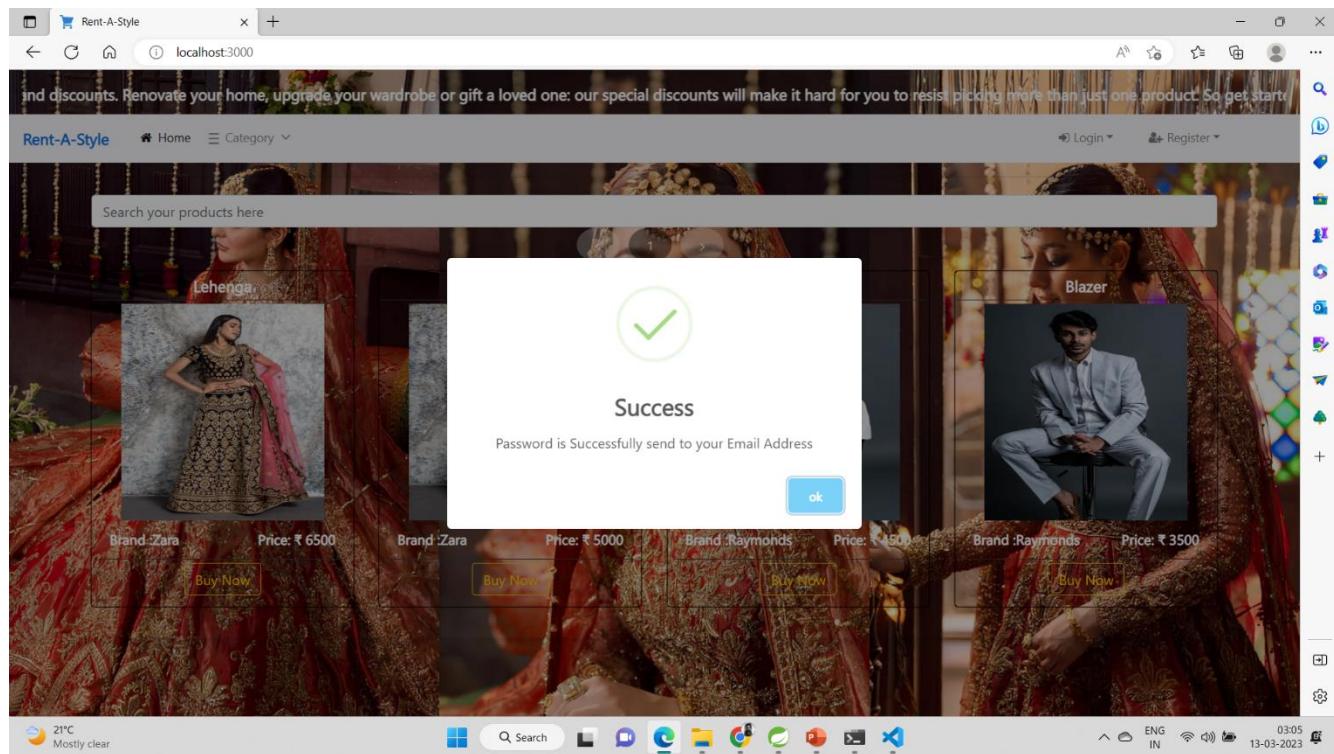
Add Product Form

➤ Update Product Form



➤ Forgot Password





mail.google.com/mail/u/0/?tab=rm&ogbl#inbox/FMfcgzGslbCvTgNDTQFNQslPXnWQvqkC

Gmail YouTube LOGIN PAGE Babel - The compile... XYZ Menus: monet... Introducing JSX - R... Study Material - Go... GitHub Realty in US API Do... Data Structure - Stu... Singleton Design P...

Compose

Inbox 14,327

- Starred
- Snoozed
- Important
- Sent
- Drafts 98
- Categories
- More

Labels

+ More

Search mail

Alert Password--Rent-A-Style > [Inbox]

anveshmodak99@gmail.com to me Mar 12, 2023, 8:23PM (6 hours ago)

Please Remeber, your Password is sandy

anveshmodak99@gmail.com to me Mar 12, 2023, 11:49PM (3 hours ago)

anveshmodak99@gmail.com to me Mar 12, 2023, 3:04AM (4 minutes ago)

Please Remeber, your Password is sandy

Reply Forward

Enable desktop notifications for Gmail. OK No thanks

21°C Mostly clear

ENG IN 03:09 13-03-2023

6. TESTING

One of the main purposes of testing is to validate and verify that the system works as intended. No program or system design is perfect. However, if we implement the system without proper testing, then it may cause problems and lead to a bad user experience.

Testing and checking outcomes of each test gives us the best chance to detect and correct errors before the system is implemented in a production environment.

In the course of our project, we made an effort to manually test each component. In all cases, we obtained the desired results as demonstrated below.

A. CUSTOMER FEATURES TEST

Description Outcome Result

1. Register as Customer

1	Register new customer	The details were saved in database.	Passed
---	-----------------------	-------------------------------------	--------

2. Login as Customer

1	Login	Successfully fetched from database and authenticated	Passed
---	-------	--	--------

3. Browse products

1	Browse products	Successfully fetched the products from database	Passed
---	-----------------	---	--------

4. Add product to Cart

1	Add product to cart	The product was successfully added to the cart	Passed
---	---------------------	--	--------

5. View Cart

1	View Cart	The cart details were fetched from the database	Passed
---	-----------	---	--------

6. Place order

1	Place order	The order was successfully placed.	Passed
---	-------------	------------------------------------	--------

7. View Order History

1	View Order	The orders were fetched from the database.	Passed
---	------------	--	--------

8. Delete order

1	Delete order	Order was successfully removed from the database	Passed
---	--------------	--	--------

9. Update customer profile

1	Update profile	Customer details were successfully updated	Passed
---	----------------	--	--------

10. Logout

1	Logout	The session was cleared.	Passed
---	--------	--------------------------	--------

B. SELLER FEATURES TEST

Description Outcome Result

1. Register as Seller

1	Register new seller	The details were saved in database.	Passed
---	---------------------	-------------------------------------	--------

2. Login as Seller

1	Login	Successfully fetched from database and authenticated	Passed
---	-------	--	--------

3. Add product

1	Add product	The product was successfully added to the database	Passed
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4. Update product details

1	Update product	Product details were successfully updated	Passed
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5. Logout

1	Logout	The session was cleared.	Passed
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6. Deactivate Seller account

1	Delete account	The account was deleted from the database.	Passed
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C. ADMIN FEATURES TEST

1. Login as Admin

1	Login	Successfully fetched from database and authenticated	Passed
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2. Deactivate Seller and Customer account

1	Delete account	The account was deleted from the database.	Passed
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3. View Order History

1	View Order	The orders were fetched from the database.	Passed
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4. Update admin profile

1	Update profile	Admin details were successfully updated	Passed
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5. Logout

1	Logout	The session was cleared.	Passed
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7. CONCLUSION

“Rent-A-Style”, is an online shopping application, developed by our project team

to simplify the online sale and purchase of products. We tried using the latest technologies that are cross-platform and robust.

Each and every software we used was open-source in nature, which keeps the cost of production at a minimum.

We were also meticulous about the user experience aspect of our application so that navigating our website is an easy and seamless experience.

In conclusion, “Rent-A-Style” as an application would definitely be a good choice for any product trading business that wishes to enter the online market. We are confident that the numerous features and visually appealing look of the application will certainly give a big boost to the business.

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8. FUTURE SCOPE

Using whatever we have learnt over the duration of this course, we tried to make our project as user-friendly and gave it as many features as possible in the limited time allotted for the project work. That said, there are certainly more features that can be added to our application. Some of those are mentioned below:

1. Product details can be viewed by hovering on the product.
2. Wish list can be implemented.
3. Customers can add reviews and feedbacks.
4. Additional payment means can be added other than cards.
5. After a confirmed purchase, an email with the invoice of the orders can be sent to the customer.
6. An order conformation notification/mail will be sent to the seller.

9. REFERENCES

Following is the list of websites we referred during the course of our project

1. <https://getbootstrap.com/docs/5.1/getting-started/introduction/>
2. <https://reactjs.org/docs/getting-started.html>
3. <https://reactjs.org/docs/getting-started.html>
4. <https://www.baeldung.com/>
5. <https://www.w3schools.com/>
6. <https://docs.spring.io/springdata/jpa/docs/current/reference/html/#reference>
7. <https://javadoc.io/doc/org.springframework.data/spring-datajpa/latest/index.html>
8. <https://developer.mozilla.org/en-US/>
9. <https://reactstrap.github.io/?path=/story/home-installation--page>
10. <https://mui.com/material-ui/getting-started/overview/>