



OOP2 PROJECT MILESTONE (3)

Object Oriented Programming 2 Year (2025) –

Second Semester Instructor: Dr. Salma





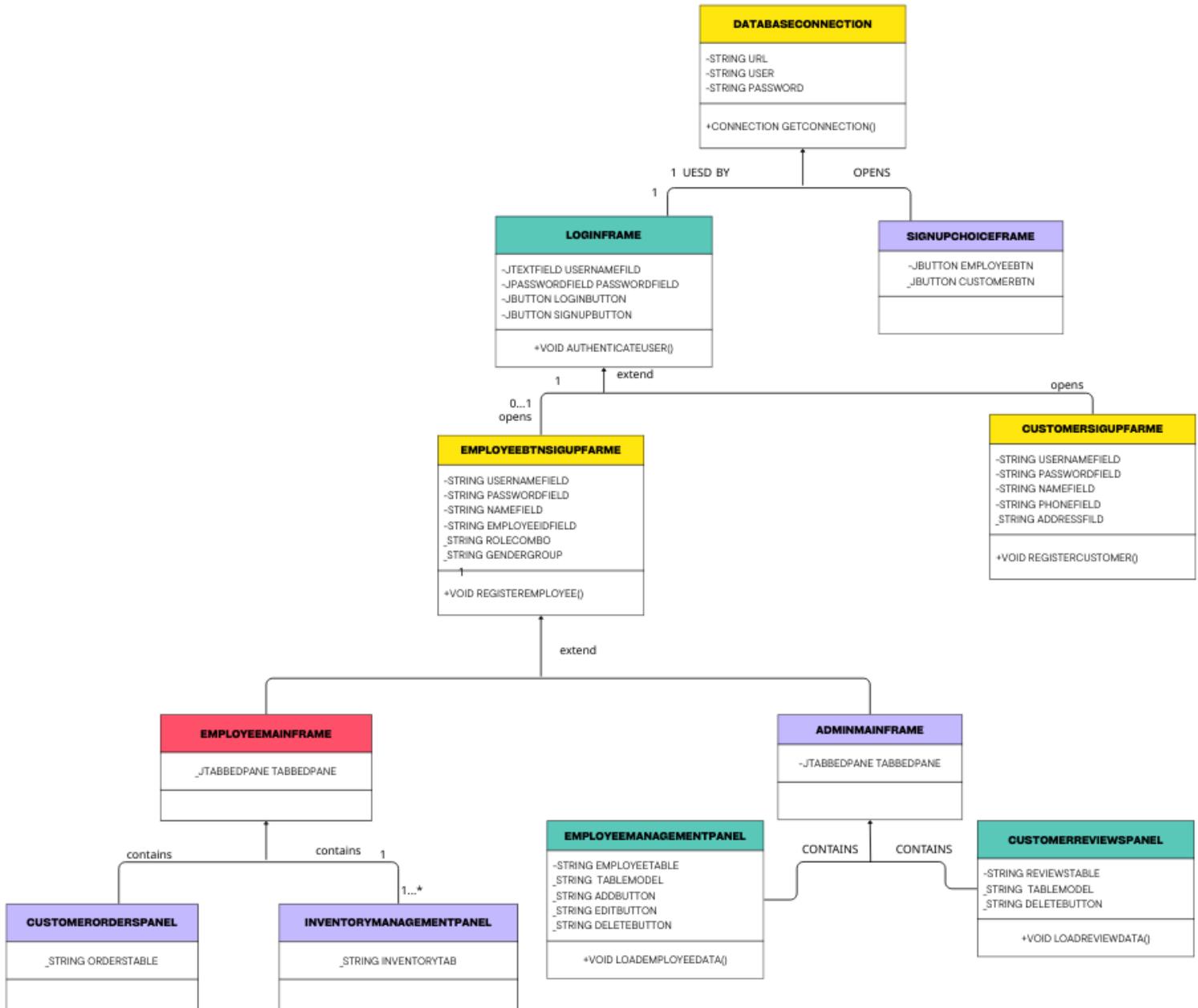
Project Group Number (in Blackboard):6

Section Number: Group (6)

Project Title: Precious-Online clothing store

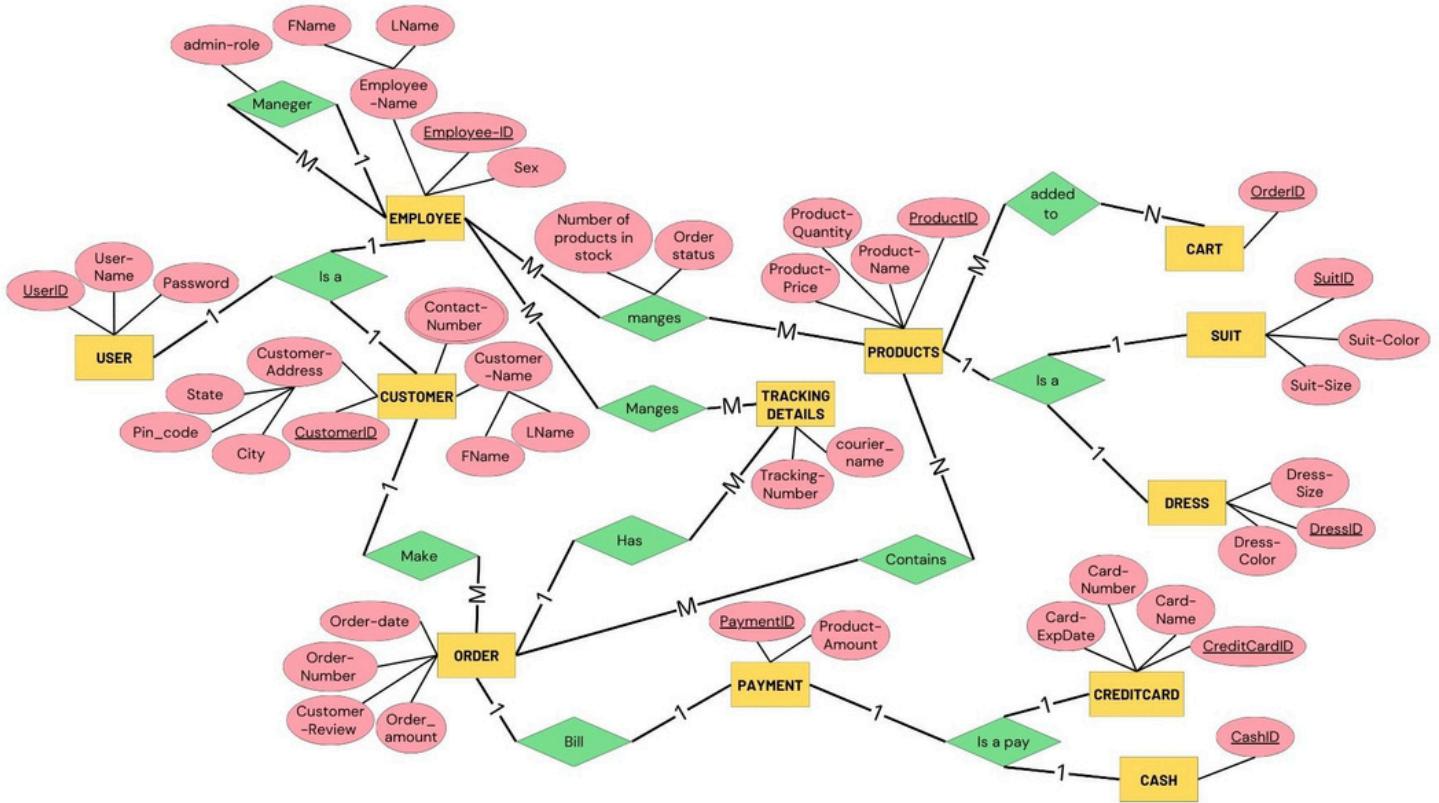
STUDENT NAME	ID
Reema Ali Algarni	2230003817
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Norah Saeed Al Ziyad	2230005461
Khawla Meshal Al-whibbi	2230005869
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1-UML Diagram:



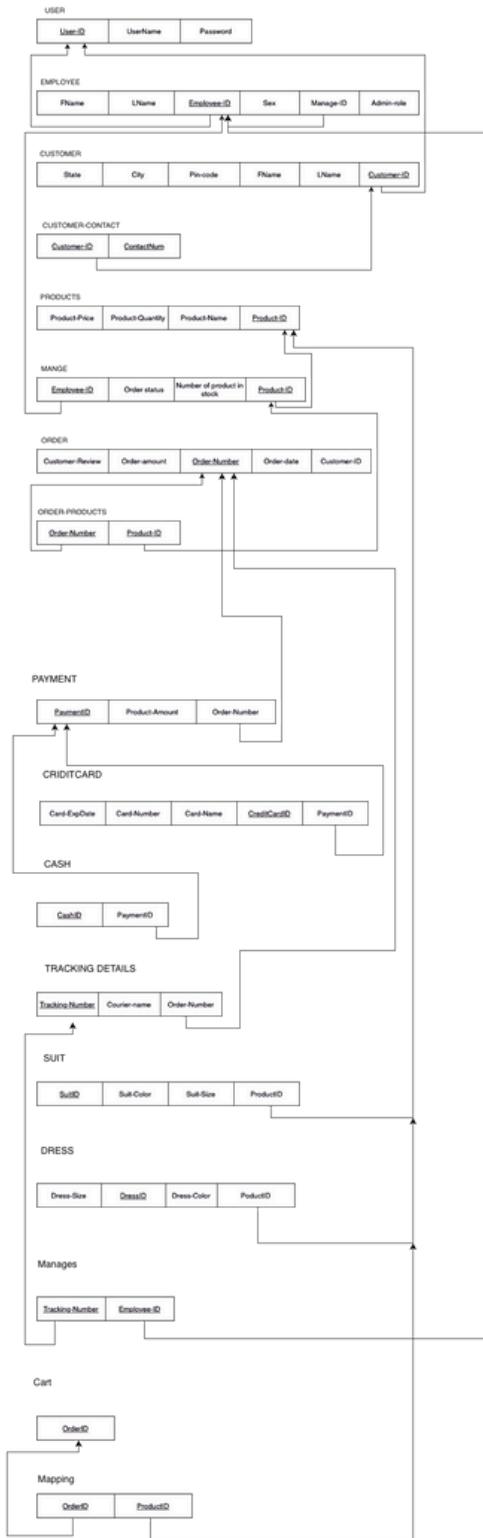


2-ER Diagram:



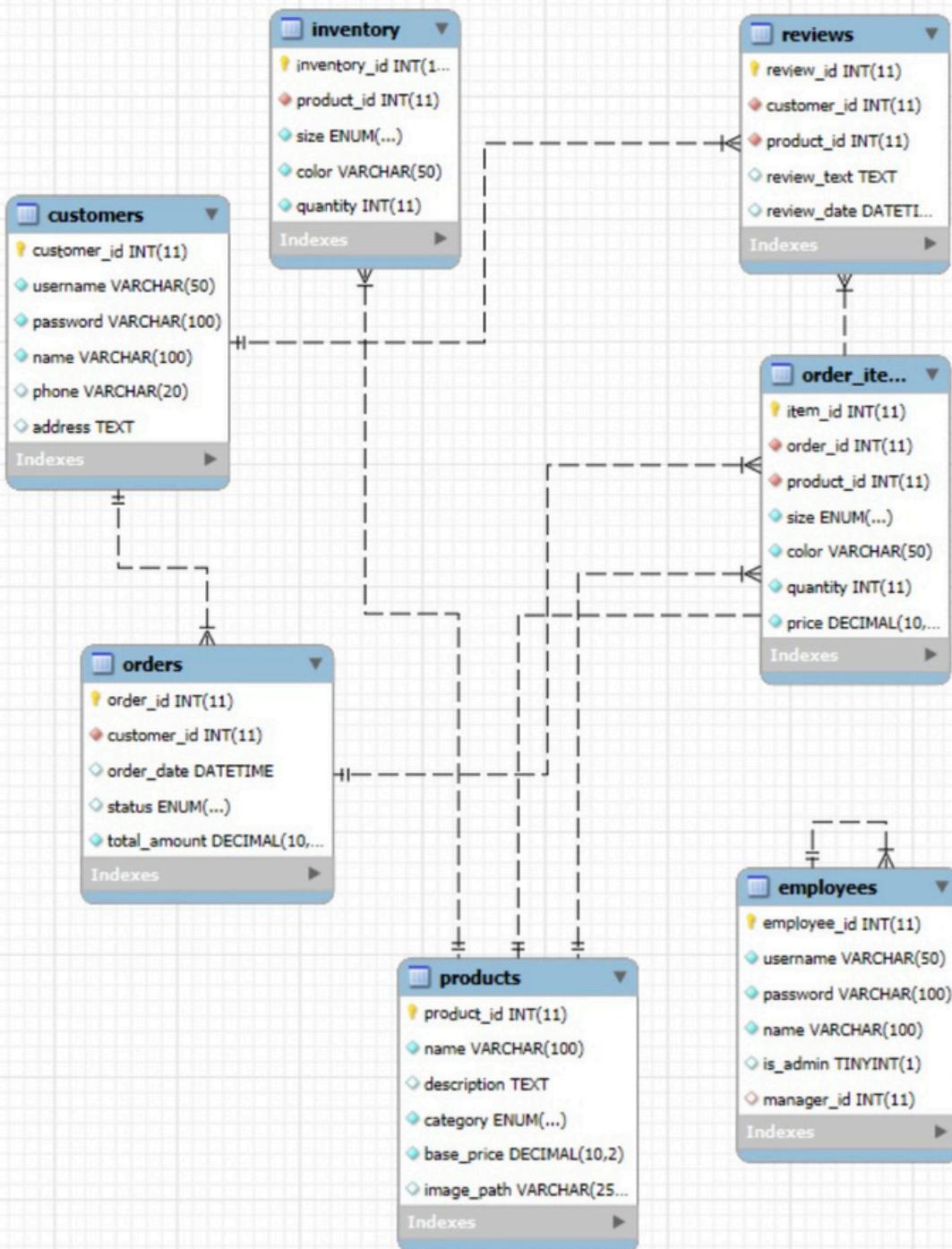


3-Database Schema:





4-EER Diagram:





5-Database Tables:

Table 1: customers

customer_id	username	password	name	phone	address
1	heshamm	7e4a8d09ca3762af61e59520943 dc264948f941b	hesham	1545482 54589	egypt

Table 2 : employees

employee_id	username	password	name	is_admin	manager_id
1	admin	f865b53623b121fd34ae542 6c792e5c33af8c227	System Admin	1	NULL
2	hesham	7e4a8d09ca3762af61e5952 0943dc264948f941b	hesham	0	NULL

Table 3 : Orders

order_id	customer_id	order_date	status	total_amount
1	1	2025-04-27 20:16:09	Order confirmed	150.00
2	1	2025-04-27 23:52:53	Order confirmed	150.00

Table 4: reviews

review_id	customer_id	product_id	review_text	review_date
1	1	1	nice	2025-04-27 23:51:32

Table 5: order_item

item_id	order_id	product_id	size	color	quantity	price
1	1	4	M	Black	1	150.00
2	2	1	M	Black	1	150.00



Table 6 : products

product_id	name	description	category	base_price	image_path
1	Velvet Dream	Elegant white dress for special occasions	Dress	299.99	a.jpg
2	Midnight Bloom	Beautiful black dress for evening parties	Dress	349.99	BD.png
3	Royal Navy	Dark blue suit for formal meetings	Suit	499.99	DB.jpg
4	Silver mist	Classic black suit, timeless choice	Suit	599.99	B.jpg
5	Blush Elegance	Elegant white dress for special occasions	Dress	299.99	BW.png
6	Amethyst Glow	Beautiful black dress for evening parties	Dress	349.99	kgk.png
7	Classic noir	Dark blue suit for formal meetings	Suit	499.99	C.jpg
8	Urban Steel	Classic black suit, timeless choice	Suit	599.99	B.jpg
9	Sapphire grace	Elegant white dress for special occasions	Dress	299.99	ss.png
10	Silver Whisper	Beautiful black dress for evening parties	Dress	349.99	e.png
11	Desert sand	Dark blue suit for formal meetings	Suit	499.99	dfd.jpg
12	Arctic White	Classic black suit, timeless choice	Suit	599.99	rr.jpg



Table 7 : inventory

inventory_id	product_id	size	color	quantity
1	1	S	White	12
2	1	M	White	15
3	2	L	Black	8
4	3	XL	Navy Blue	5
5	4	M	Black	11
20	1	L	White	17
21	1	XL	White	15
22	2	S	Black	15
23	2	M	Black	12
24	2	XL	Black	8
25	3	S	Navy Blue	6
26	3	M	Navy Blue	14
27	3	L	Navy Blue	15
28	4	S	Black	7
29	4	L	Black	18
30	4	XL	Black	5
31	5	S	White	9
32	5	M	White	14
33	5	L	White	10
34	5	XL	White	10
35	6	S	Black	6
36	6	M	Black	9
37	6	L	Black	17
38	6	XL	Black	19
39	7	S	Navy Blue	6
40	7	M	Navy Blue	9
41	7	L	Navy Blue	17
42	7	XL	Navy Blue	18

43	8	S	Black	10
44	8	M	Black	11
45	8	L	Black	17
46	8	XL	Black	13
47	9	S	White	7
48	9	M	White	5
49	9	L	White	17
50	9	XL	White	17
51	10	S	Black	19
52	10	M	Black	11
53	10	L	Black	5
54	10	XL	Black	4
55	11	S	Navy Blue	13
56	11	M	Navy Blue	13
57	11	L	Navy Blue	14
58	11	XL	Navy Blue	15
59	12	S	Black	12
60	12	M	Black	13
61	12	L	Black	14
62	12	XL	Black	11



The Work Division Between Members :

- **Shahad:** Developed the login and signup pages for the employees and customer roles.



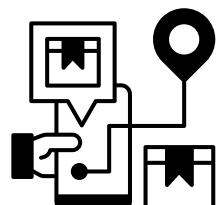
- **Maryam:** Developed the product pages, contributed to the UML diagram, and assisted with the SQL code.



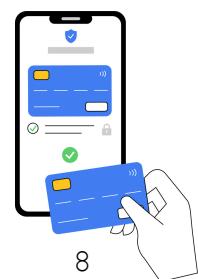
- **Khawla:** Wrote the SQL code, created the UML and EER diagrams, and implemented the cart page functionalities.



- **Reema:** Implemented order tracking functionality and designed both the manager and employee interfaces.



- **Norah:** Designed the database schema, implemented the payment pages, and prepared the project presentation.





Challenges Faced and Solutions Implemented:

- **Challenge: Establishing a reliable connection to the MySQL database on all team members' machines.**
 - Resolution: Ensured the correct JDBC driver (mysql-connector-java) was installed and verified open and accessible.
- **Challenge: Coordinating task distribution and merging work among team members.**
 - Divided responsibilities clearly from the beginning based on each member's strengths, and used version-controlled folders to manage updates and integrate each part smoothly into the final project.
- **Challenge: Structuring a complete and normalized database schema for the application.**
 - Resolution: Designed a comprehensive Entity-Relationship (ER) diagram before implementation to clearly define entities, attributes, and relationships, ensuring consistency and efficiency in the database design.
- **Challenge: Setting up a local development environment with integrated database services.**
 - Resolution:
 - Used XAMPP to create a local environment that includes Apache and MySQL services.
 - Activated both Apache (for web server functionality) and MySQL (for database management).
 - Created the database and tables using phpMyAdmin.
 - Used NetBeans for project development, taking advantage of its built-in MySQL connector.
 - Configured the database connection in the Java code using JDBC.
 - Successfully tested the connection to ensure smooth integration.



Requirements Fulfilled:

- Complete GUI built using Java Swing components (labels, buttons, tables, inputs, scroll panes, etc.).
- Separate interfaces for Customer, Employee, and Admin with role-based access.
- Full login and signup functionality.
- Homepage with two main product categories: Women's Dresses and Men's Suits.
- Product detail pages with images, descriptions, and customer reviews.
- Review system with the ability to submit and view feedback per product.
- Shopping cart with add/remove items and automatic total updates.
- Payment screen and cart review process implemented (no backend order placement).
- Payment system supporting both credit card and cash on delivery.
- Employee tools for updating inventory and tracking customer orders.
- Admin tools to add/edit/delete employees and remove customer reviews.
- JDBC integration for database communication.
- Database schema designed and implemented in MySQL.
- Use of XAMPP and phpMyAdmin for managing the development database.
- UML, ER, and EER diagrams prepared for clear system and data modeling.
- Display of product images using ImageIcon with resizing support.
- Multi-page navigation using CardLayout.
- Input validation and error handling across the system.
- Final testing and deployment using NetBeans IDE.



6-GUI Application:

Login page:

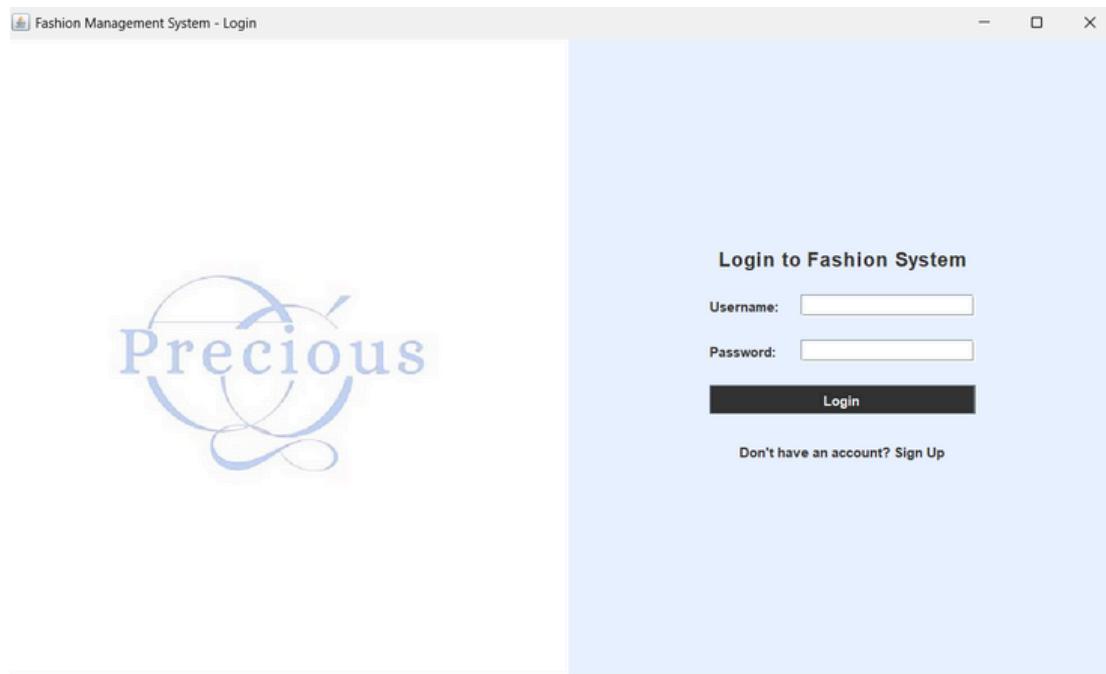


Figure1: login page

Allows users to enter their username and password to access their account



User Type selection page:

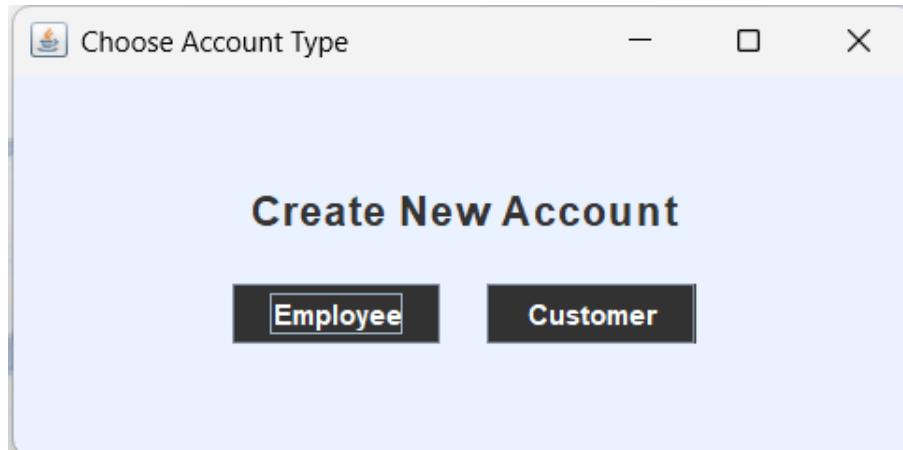


Figure 2:User Type selection page

Allows the user to choose between signing up as a customer or an employee.

customer Sign up page:

The screenshot shows a window titled "Customer Sign Up". Inside, there is a heading "Customer Registration" followed by six input fields labeled "Username", "Password", "Confirm Password", "Full Name", "Phone", and "Address", each with a corresponding text input box. Below these fields is a large "Register" button.

Figure 3: customer Sign up page

Used to register new customers by entering personal and contact details.



Employee Sign up page:

The screenshot shows a web-based employee registration form titled "Employee Registration". The form includes the following fields:

- Username: An input field for entering a user identifier.
- Password: An input field for entering a password.
- Confirm Password: An input field for re-entering the password to ensure it matches.
- Full Name: An input field for entering the employee's full name.
- Employee ID: An input field for entering a unique employee identification number.
- Role: A dropdown menu set to "Staff".
- Gender: Radio buttons for "Male" (selected) and "Female".
- Buttons: "Register" and "Cancel".

Figure 4: Employee Sign up page

Used to register employees with additional fields like Employee ID and role



Manager page:

Employee ID	Username	Name	Admin Role	Manager ID
1	admin	System Admin	Yes	0
12	a123	norah	No	0

[Add Employee](#) [Edit](#) [Delete](#)

Figure 5: employee management page

When the manager selects the "Manage Employees" button, the employee data table will appear and other options will appear, such as the "Delete" button, which deletes the employee from the table after the manager selects the employee to be deleted.



Manager page:

The screenshot shows a Windows application window titled "Employee Management". On the left, there is a list box labeled "EmployeeID" containing items 1, 2, 3, 4, and 5. In the center, a modal dialog box titled "Add Employee" is displayed. It contains fields for "ID" (with a placeholder), "Name" (with a placeholder), "AdminRole" (a dropdown menu with "Employee" selected), and "ManagerID" (a dropdown menu with "Employee" selected). At the bottom of the dialog are "Save" and "Cancel" buttons. Below the dialog are three buttons: "Add", "Edit", and "Delete".

Figure 6: add employee page

When the manager selects the “Add” button, a page will appear for him to add the employee and the employee’s information.

The screenshot shows the same "Employee Management" application window. The list box on the left now has item 4 highlighted. The central "Edit Employee" dialog box is open, showing the same fields as the "Add Employee" dialog: ID (4), Name (Dana), AdminRole (Employee), and ManagerID (1). The "Save" button is visible at the bottom of the dialog. The "Edit" button is highlighted in the row below the dialog.

Figure 7: edit employee page

When the manager selects the “Edit” button, a page will appear for him to edit the employee’s information.



Manager page:

The screenshot shows a Windows application window titled "Admin Dashboard". At the top, there are two tabs: "Employee Management" and "Customer Reviews", with "Customer Reviews" being the active tab. Below the tabs is a table with five columns: "Review ID", "Product", "Customer", "Review", and "Date". There are two rows of data in the table:

Review ID	Product	Customer	Review	Date
1	Velvet Dream	hesham	nice	2025-04-27 23:51:32.0
2	Amethyst Glow	REMAA	nice	2025-05-04 20:18:03.0

At the bottom of the table area, there is a button labeled "Delete Review".

Figure 8: customer review page

When you click the “Customer Review” button on the admin page, a page will appear containing a table of customer data and their feedback for each product.



Employee page:

Order ID	Customer	Products	Status	Date	Amount
1	hesham	Silver mist	Order confirmed	2025-04-27 20:16:09.0	150.0
2	hesham	Velvet Dream	Order confirmed	2025-04-27 23:52:53.0	150.0

[Update Status](#)

Figure 9: Customer orders page

When the employee selects the “Show Customer Orders” button, a page appears, displaying the customer orders table, and the employee can update the order status.



Employee page:

Product ID	Product Name	Size	Color	Quantity
1	Velvet Dream	S	White	12
1	Velvet Dream	M	White	15
2	Midnight Bloom	L	Black	10
3	Royal Navy	XL	Navy Blue	5
4	Silver mist	M	Black	11

+ - Save Changes

Figure 10: Inventory management page

When an employee selects the "Inventory management" button, the Inventory Management page will appear, where they can increase or decrease the number of products in stock.



Customer page:

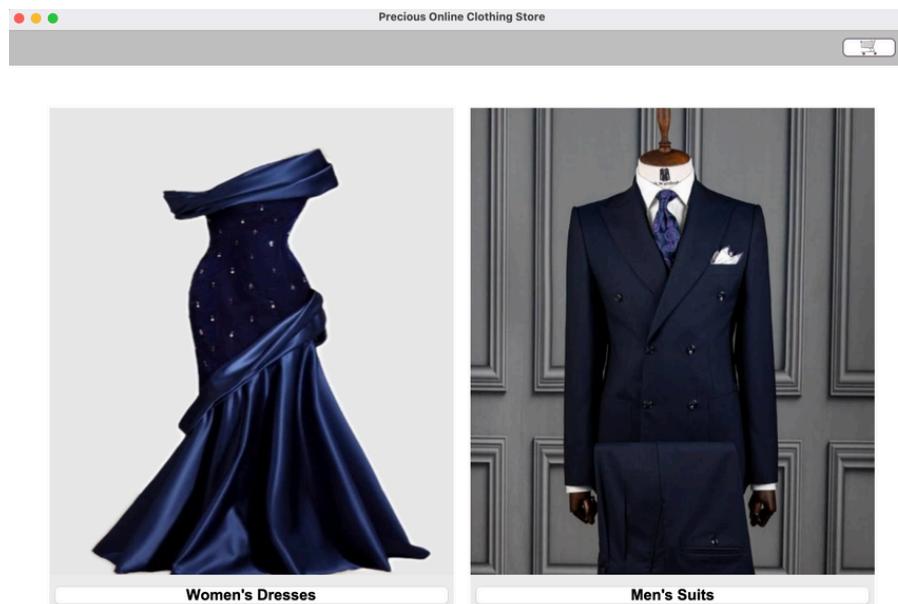


Figure 11: Customer main page .

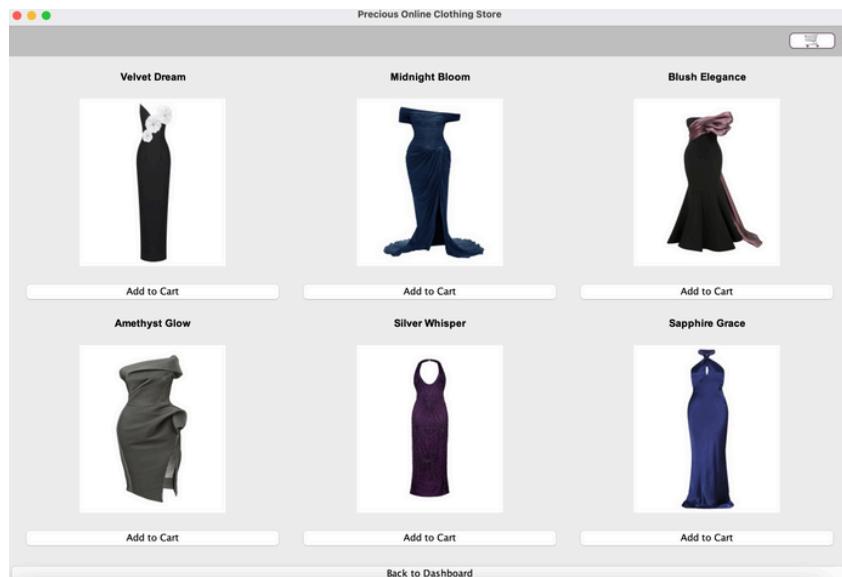


Figure 12: Women's Dresses page.



Customer page:

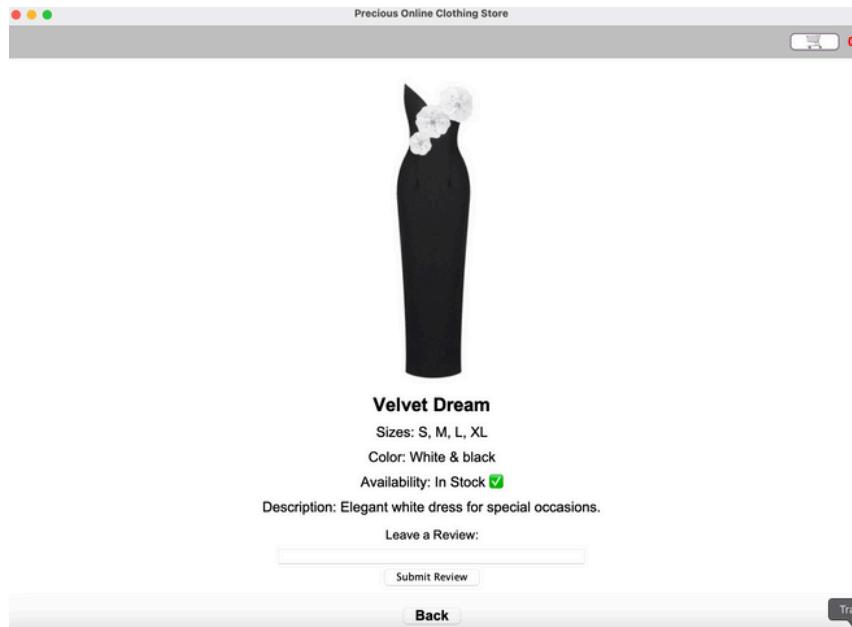


Figure 13: Customer has clicked on "Velvet Dream" dress .

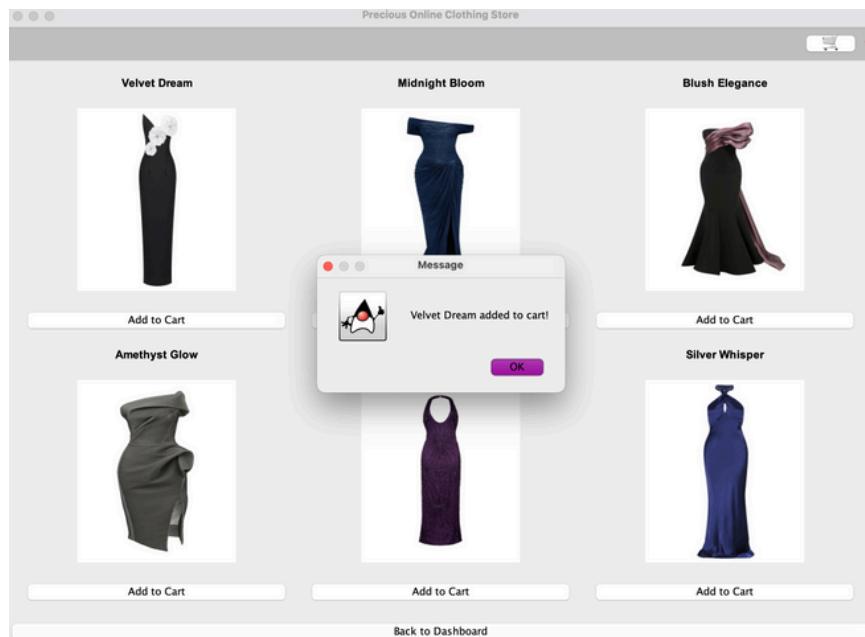


Figure 14: Customer has added the dress to the cart.



Customer page:

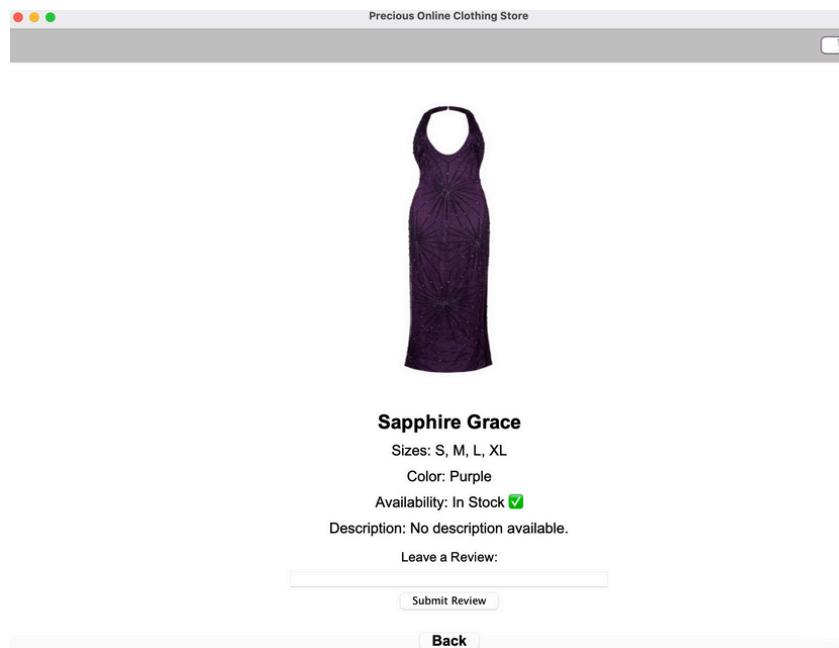


Figure 15: Customer has clicked on “Sapphire Grace” dress.

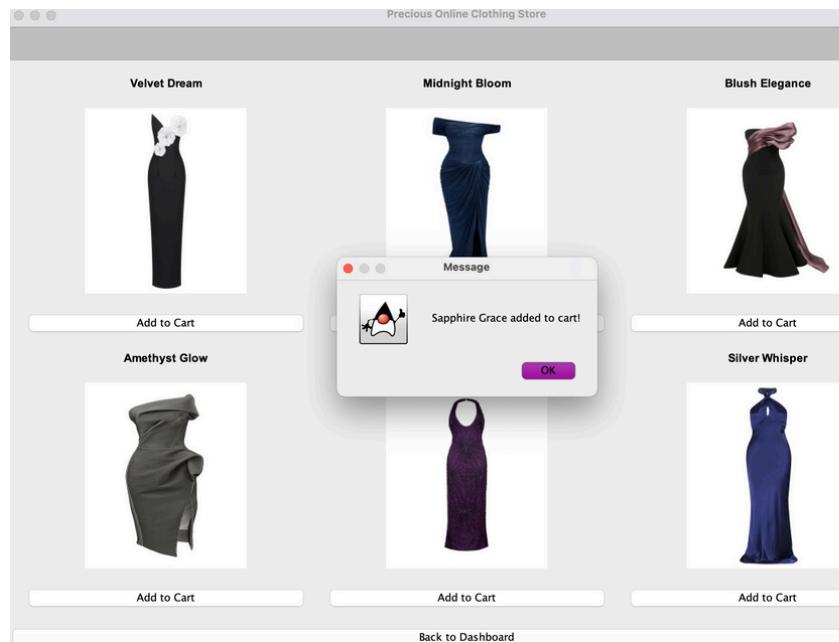


Figure 16: Customer has added the dress to the cart.



Customer page:

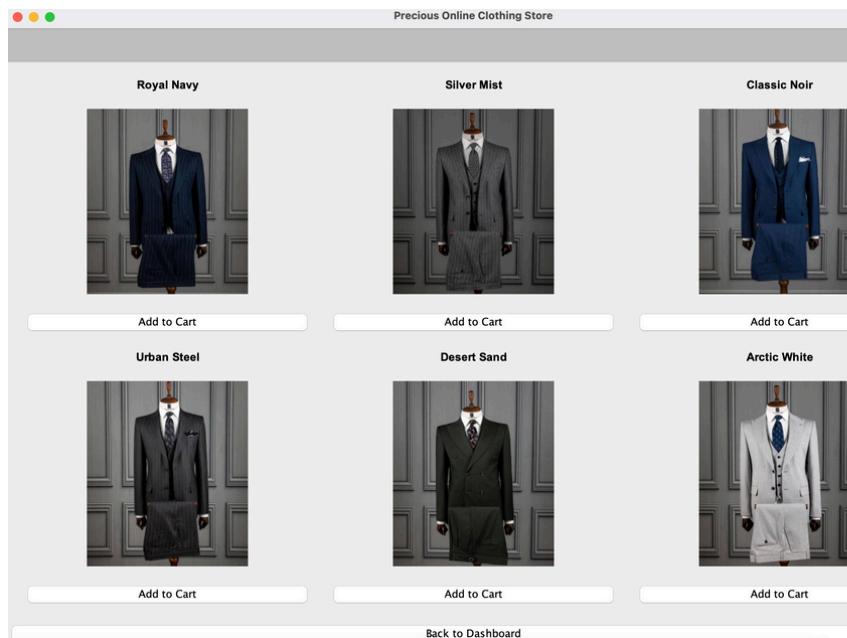


Figure 17: Customer has clicked on the Men's Suites.

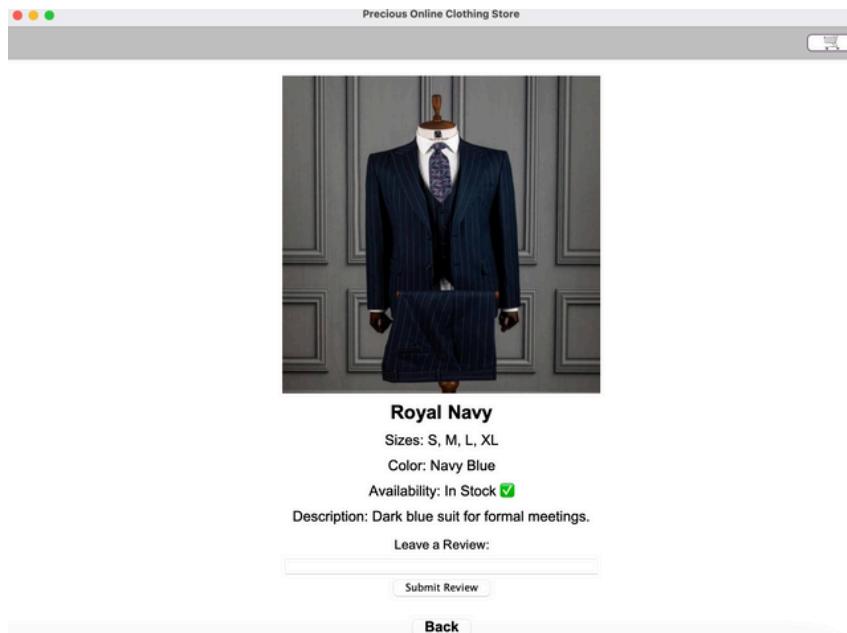


Figure 18: Customer has clicked on the "Royal Navy" suite.



Customer page:

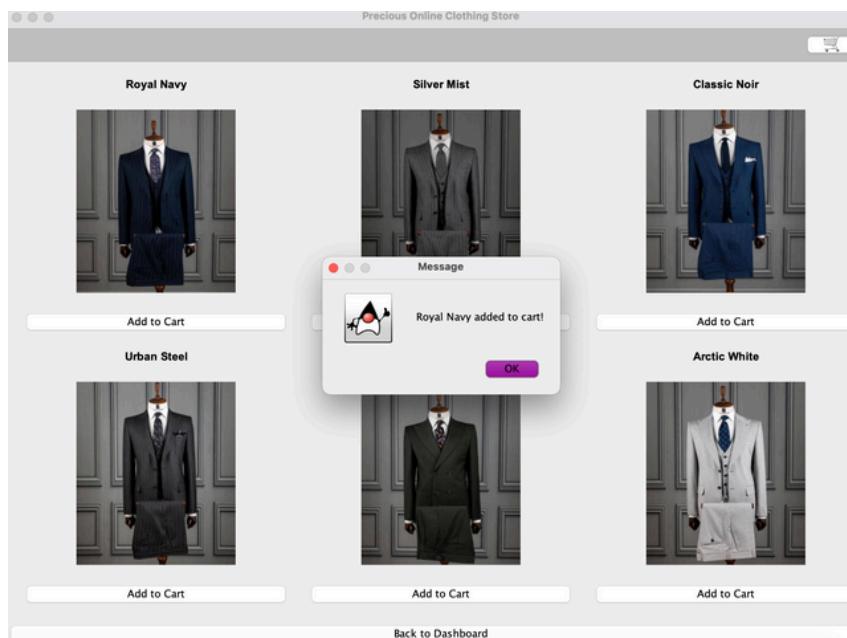


Figure 19: Customer has added the suite to the cart.



Shopping Cart page:

Precious Online Clothing Store

Your Shopping Cart

Order #	Product ID	Name	Qty	Price
Order #1	200	Royal Navy	1	150 SAR
Order #2	100	Velvet Dream	1	150 SAR
Order #3	104	Sapphire Grace	1	150 SAR

Total: 450 SAR [Proceed to Payment](#) [Back to Dashboard](#)

Figure 20: Customer has clicked the cart to review and see the total of their purchases.



Payment page:

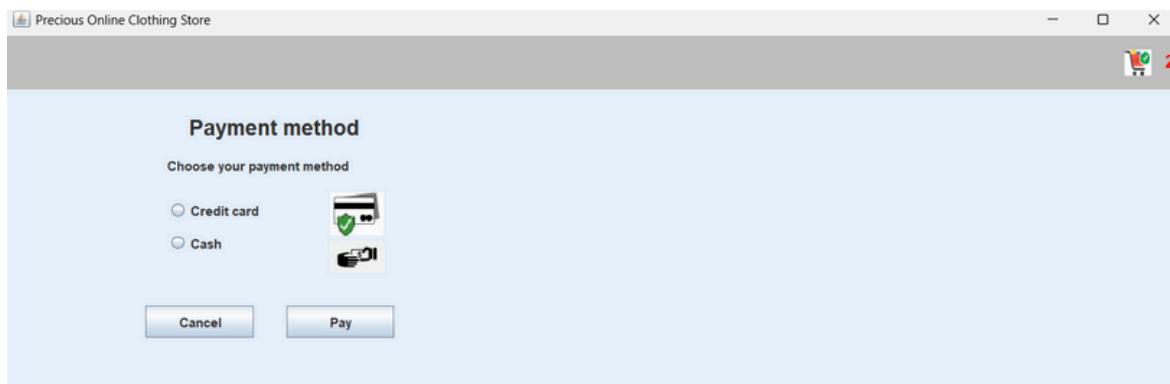


Figure 21: payment page

After the user click on proceed to payment next step confirm his order by selecting the payment method credit card or cash.

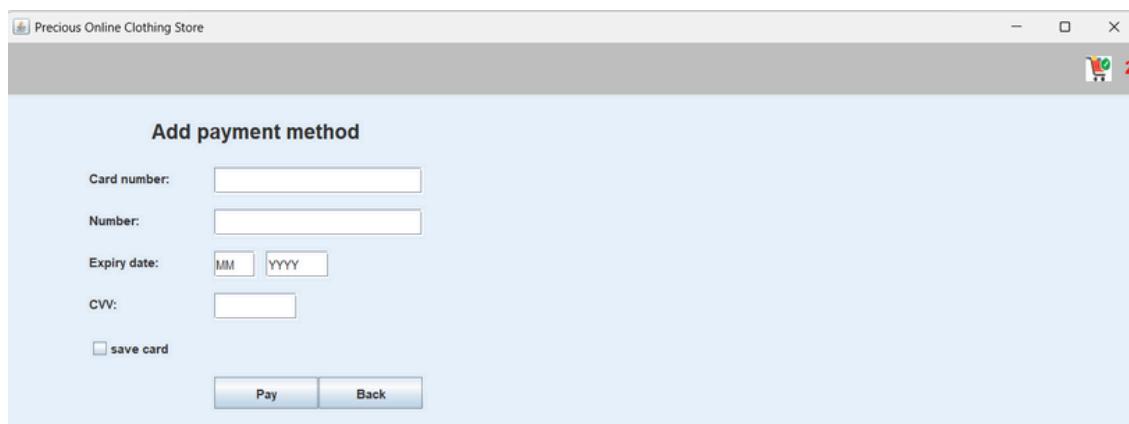


Figure 22: payment page 2

If the user selects the credit card method then enters the card number, Expiry date, and cvv. the user has the option to save this card for next time.



7-Application's Structure :

