Habib University
shaping futures

CS355 – Database Project Proposal Form

1.1. Project Information to be filled by the student

Title com . پوشاک (poshaak.com)	
Section: L-2	Instructor: Prof. Umer Tariq

1.2. Student(s) Information

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Section: L-2	Batch: 2026

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Section: L-2	Batch: 2026

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Section: L-2	Batch: 2026

This e-commerce platform aims to provide a seamless shopping experience for users looking to purchase kids' garments. It encompasses functionalities such as an extensive product catalog, user and admin account management, cart management, billing options, and advanced search and filtering features.

Here’s a brief user journey map:

CUSTOMER:

User Registration & Login:

When a user registers as an admin or customer, their account details (Name, Email, Password etc) are stored in the Users table with a designation flag (admin/customer) for access control.

The verification link sent to their email triggers an update in the database to verify the account status.

Selecting and Viewing an item:

User will have access to view all the items available in the products table. Moreover, the user can apply filters in terms of size, color and category to extract out certain products from the database.

User Cart & Ordering:

Addition of items to the cart triggers insertion or update operations in the User_Cart / Order table, associating the user ID with the selected item(s).

Removal of items from the cart triggers deletion operations in the User_Cart table for the specified item.

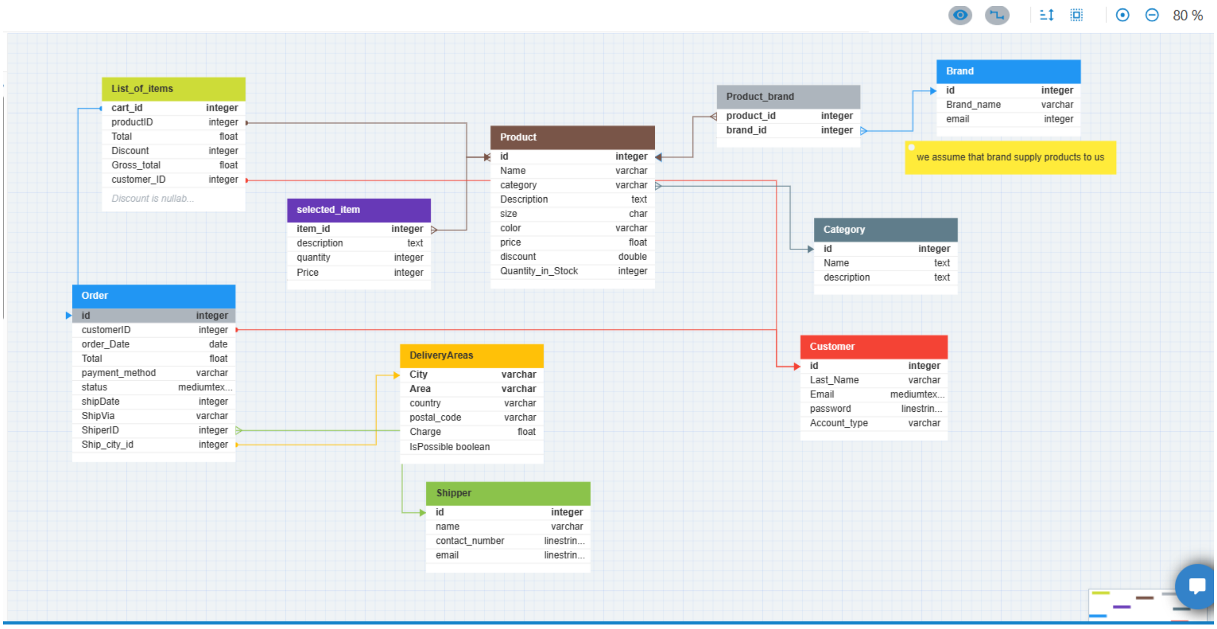
Upon finalizing the cart, the transition to the billing screen prompts the system to inquire about payment details. Once confirmed, a new entry is made in the Orders table, linked to the user ID and containing details of the purchased items.

ADMIN:

Product Catalog & Management:

Admins, through a dedicated interface, can upload items for sale. Details like item category, and specifics are stored (added and deleted) in / from the products table

Users(customers & admins) viewing items triggers a selection query in the Items table, retrieving details for display based on the selected item.



List_of_items	
cart_id	integer
productID	integer
Total	float
Discount	integer
Gross_total	float
customer_ID	integer

Discount is nullab...

selected_item	
item_id	integer
description	text
quantity	integer
Price	integer

Product	
id	integer
Name	varchar
category	varchar
Description	text
size	char
color	varchar
price	float
discount	double
Quantity_in_Stock	integer

Product_brand	
product_id	integer
brand_id	integer

Brand	
id	integer
Brand_name	varchar
email	integer

we assume that brand supply products to us

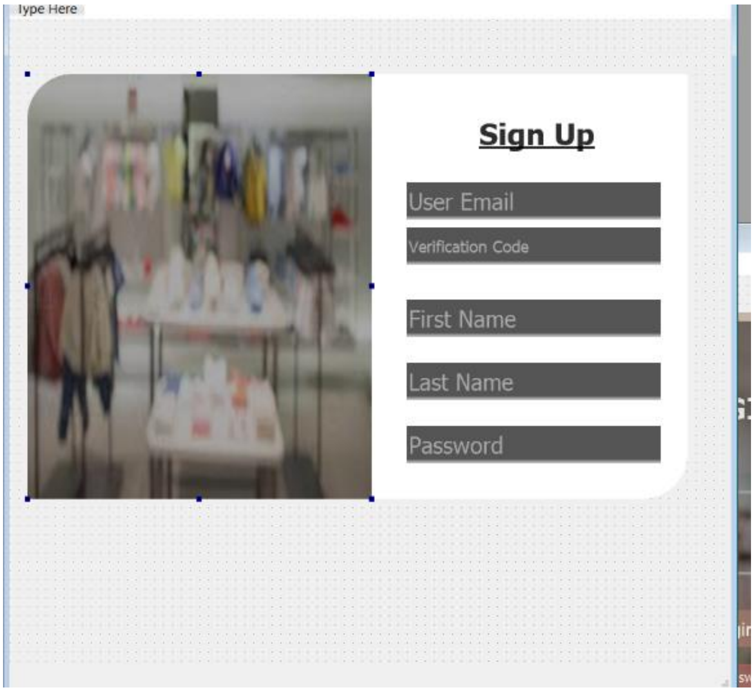
Category	
id	integer
Name	text
description	text

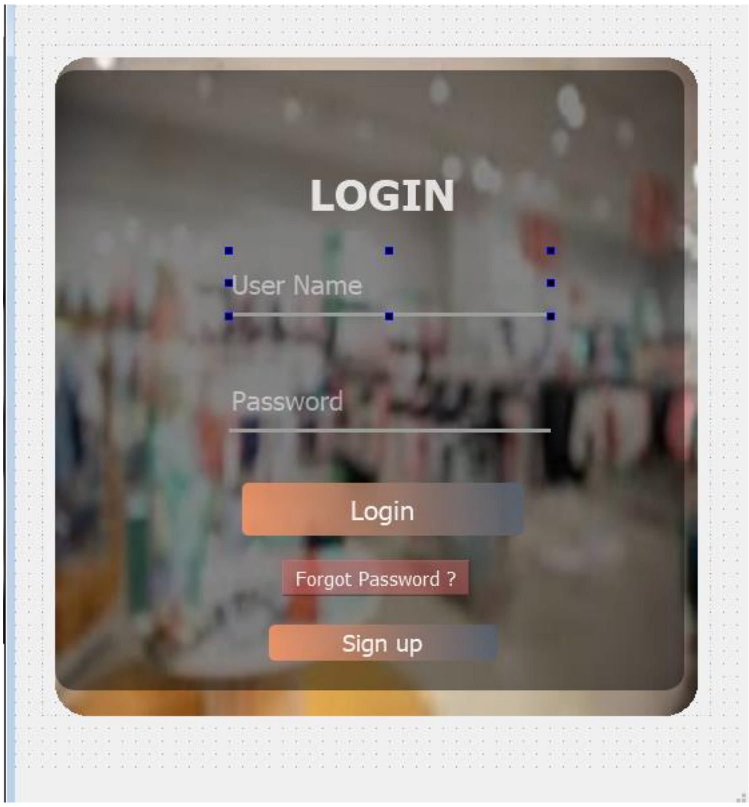
Order	
id	integer
customerID	integer
order_Date	date
Total	float
payment_method	varchar
status	mediumtex...
shipDate	integer
ShipVia	varchar
ShiperID	integer
Ship_city_id	integer

DeliveryAreas	
City	varchar
Area	varchar
country	varchar
postal_code	varchar
Charge	float
IsPossible boolean	

Customer	
id	integer
Last_Name	varchar
Email	mediumtex...
password	linestrin...
Account_type	varchar

Shipper	
id	integer
name	varchar
contact_number	linestrin...
email	linestrin...





Login Screen:

User Action: Enters email and password to log in.

Corresponding Database Operations:

The system will perform a query in the Users table to check if the entered email exists.

If the email exists, it will verify if the entered password matches the stored password for that email.

Upon successful verification, the system grants access to the corresponding user type (admin/customer) based on the designation in the Users table.

Signup Screen:

User Action:

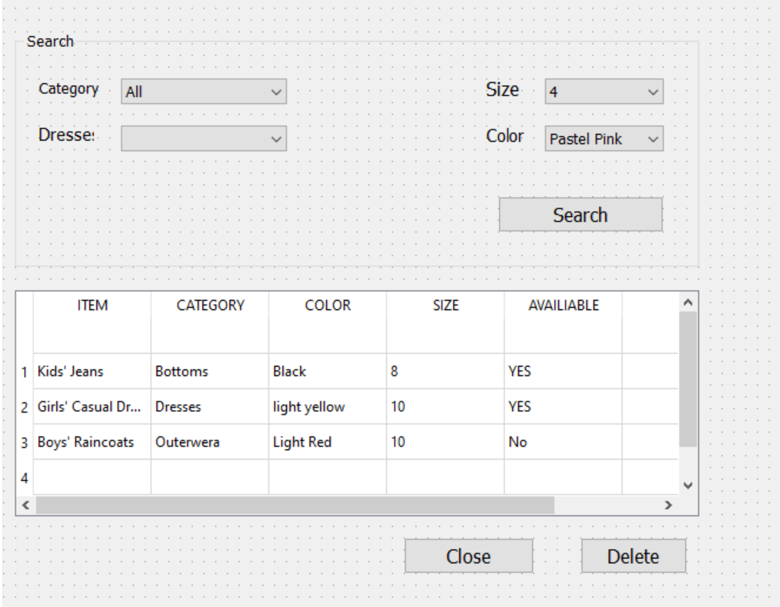
Enters details like Name, Email, and Password to create a new account.

Corresponding Database Operations:

Data entered in the signup form triggers an insertion operation into the Users table, storing the new user's details.

Designation (admin/customer) is also stored based on the selection made during signup.

Both screens interact with the Users table primarily, with the login screen focused on authentication via querying existing user data, while the signup screen involves inserting new user information into the database.



Category: All

Dresse:

Size: 4

Color: Pastel Pink

	ITEM	CATEGORY	COLOR	SIZE	AVAILIABLE
1	Kids' Jeans	Bottoms	Black	8	YES
2	Girls' Casual Dr...	Dresses	light yellow	10	YES
3	Boys' Raincoats	Outerwera	Light Red	10	No
4					

Product Viewing Screen with Filters:

User Action:

User accesses the product viewing screen displaying all available items.

Filter options for color, size, and category are visible as buttons or search menus.

Corresponding Database Operations:

Initially, a query retrieves all items from the Items table to display the entire product catalog.

When the user applies filters:

Color Filter:

The system triggers a query filtering items based on the selected color attribute in the Items table.

Size Filter:

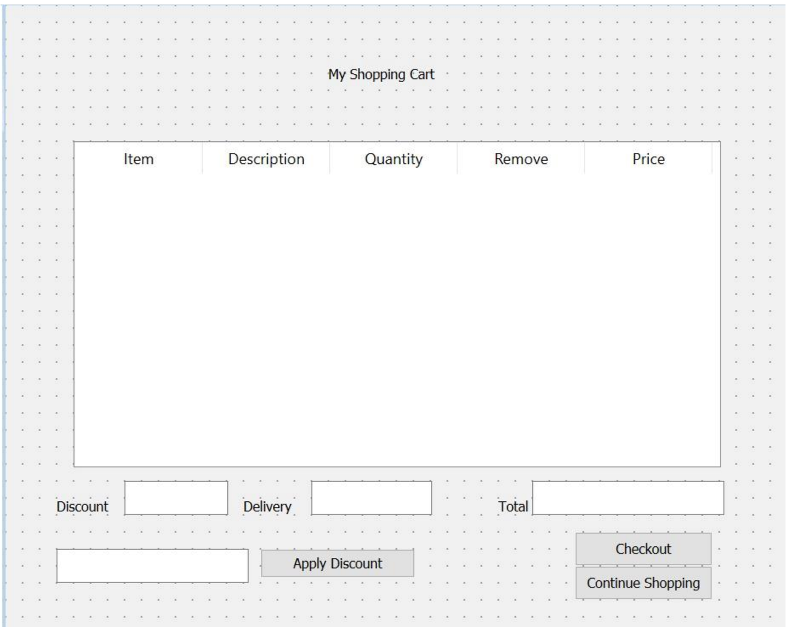
Another query filters items based on the chosen size attribute in the Items table.

Category Filter:

Similar query operations filter items based on the selected category attribute in the Items table.

Each filter option modifies the SQL query's WHERE clause to fetch items matching the selected criteria and updates the displayed items accordingly on the interface.

This screen interacts heavily with the Items table in the database. Queries are performed dynamically based on the selected filters to fetch and display items that match the user's specified criteria, offering a personalized and refined product viewing experience.



Shopping Cart Screen:

User Action:

Adding items to the cart, viewing cart contents, removing items, and proceeding to checkout.

Corresponding Database Operations:

Adding Items to Cart:

When a user adds an item to the cart, an entry is made or updated in the User_Cart table. This table likely includes columns such as UserID, ItemID, and Quantity.

Viewing Cart Contents:

To display cart items, a query is executed to fetch all items in the User_Cart table associated with the user's ID. Additional queries join the Items table to retrieve detailed information about each item in the cart.

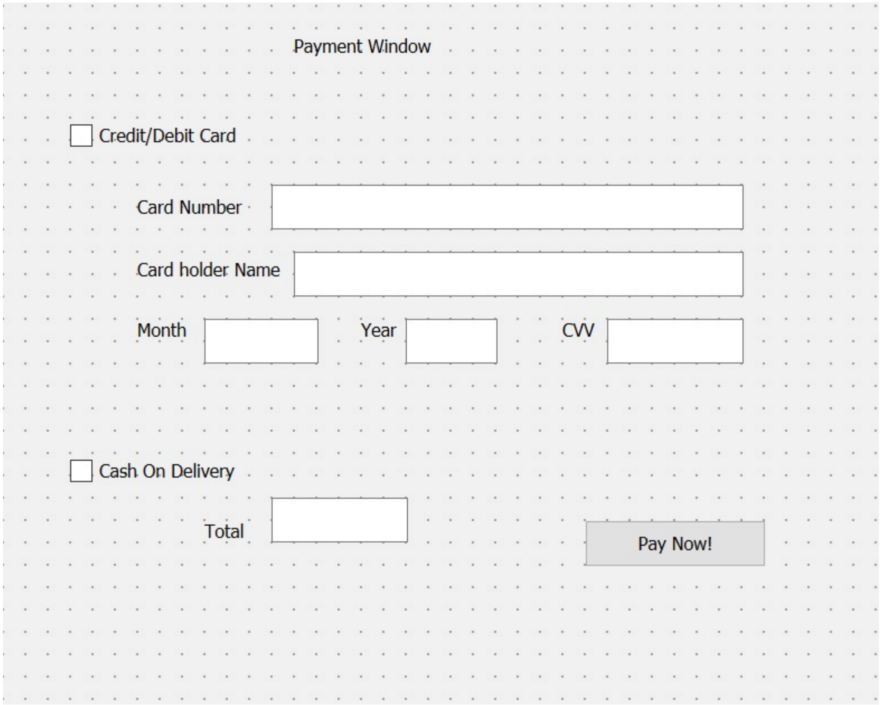
Removing Items from Cart:

When a user removes an item from the cart, a deletion operation occurs in the User_Cart table for the specified item belonging to that user.

Proceeding to Checkout:

Once the user confirms the cart and proceeds to checkout, the system generates an order ID and creates a new entry in the Orders table. This entry includes details such as OrderID, UserID, ItemID, Quantity, and PaymentStatus.

This screen primarily interacts with the User_Cart and Orders tables in the database. It manages the addition, removal, and viewing of items in the cart and facilitates the transition to the checkout process by creating orders associated with the user and the items they intend to purchase.



Payment Window:

User Action:

Choosing between cash on delivery or card payment options and providing necessary payment details.

Corresponding Database Operations:

Cash on Delivery (COD):

If the user selects cash on delivery, the system proceeds without requiring any immediate database interaction related to payment details.

The order status might be updated to indicate pending payment or awaiting delivery.

Payment with Card:

If the user opts to pay with a card, the system collects the necessary payment details (like card number, expiry, CVV, etc.).

The user's entered card details initiate an operation to securely process and verify the payment. This might involve external payment gateways or APIs for handling the transaction. (not included herein the project)

Upon successful payment authorization:

The payment status in the Orders table corresponding to the user's order ID is updated to reflect a successful payment.

Additional transaction details, such as payment ID, transaction time, or authorization codes, might also be logged in a Transactions or Payments table for record-keeping purposes.

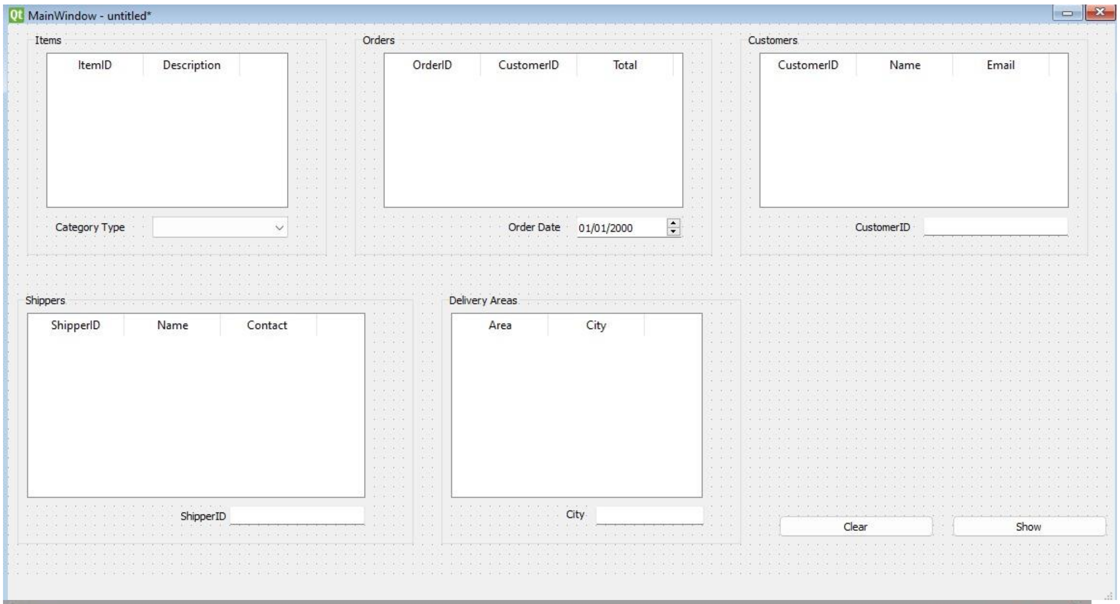
Database Operations Summary:

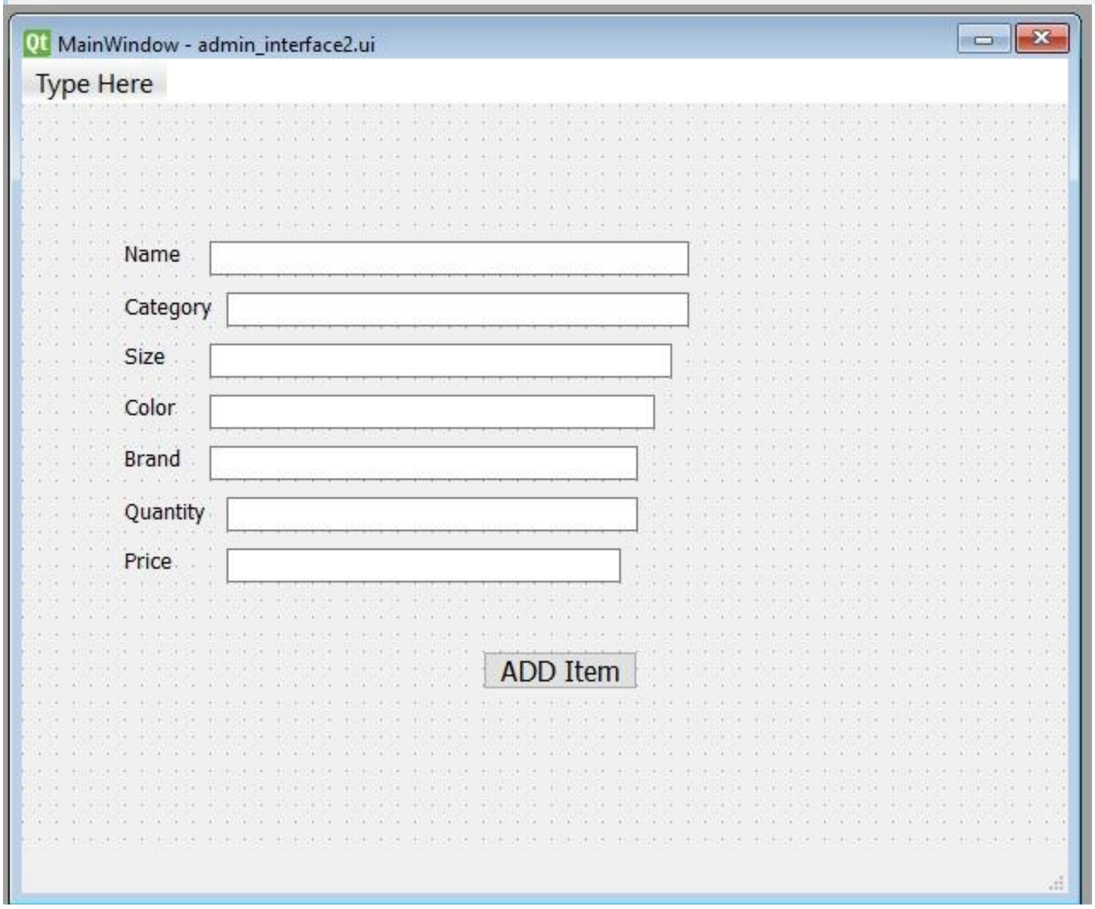
Cash on Delivery: No direct database operation for payment, but the order status might be updated.

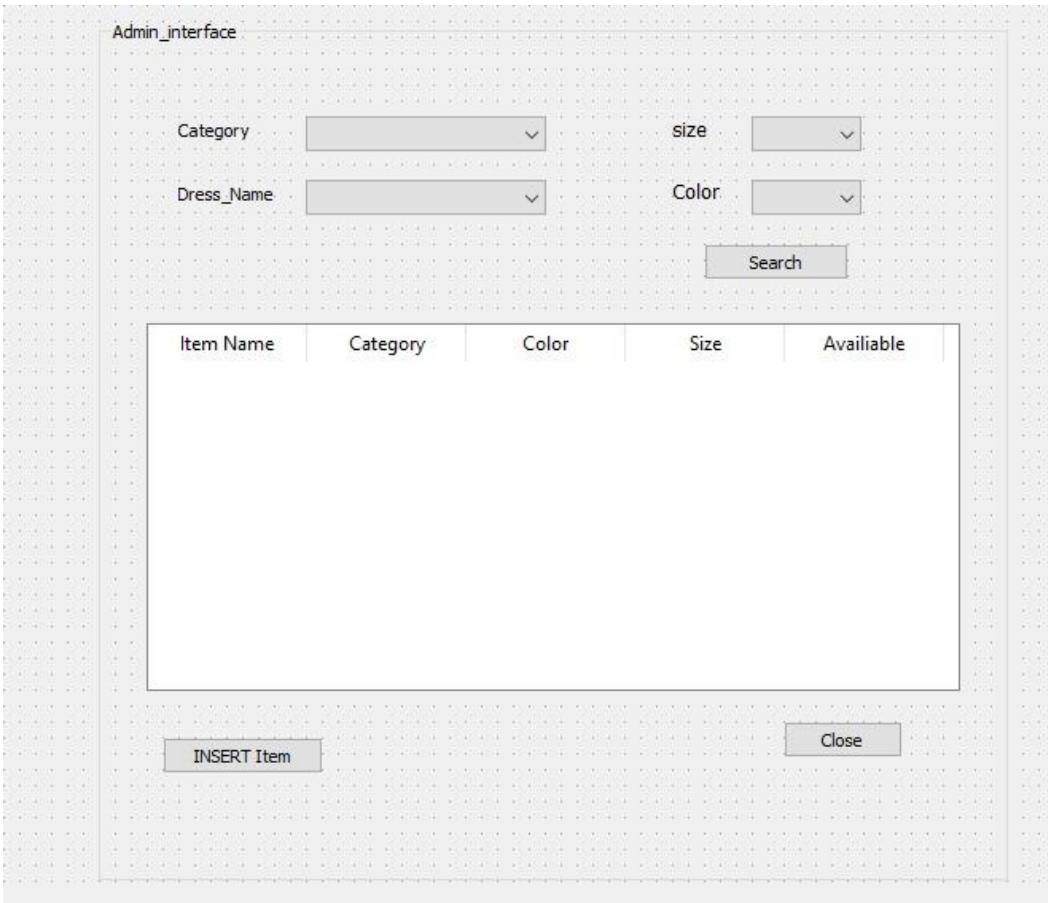
Card Payment: Involves operations to process the payment, update the order's payment status, and log transaction details in the database.

This screen primarily interacts with the Orders table to update the payment status associated with the user's order ID. Additionally, for card payments, it can store the details with in the order.

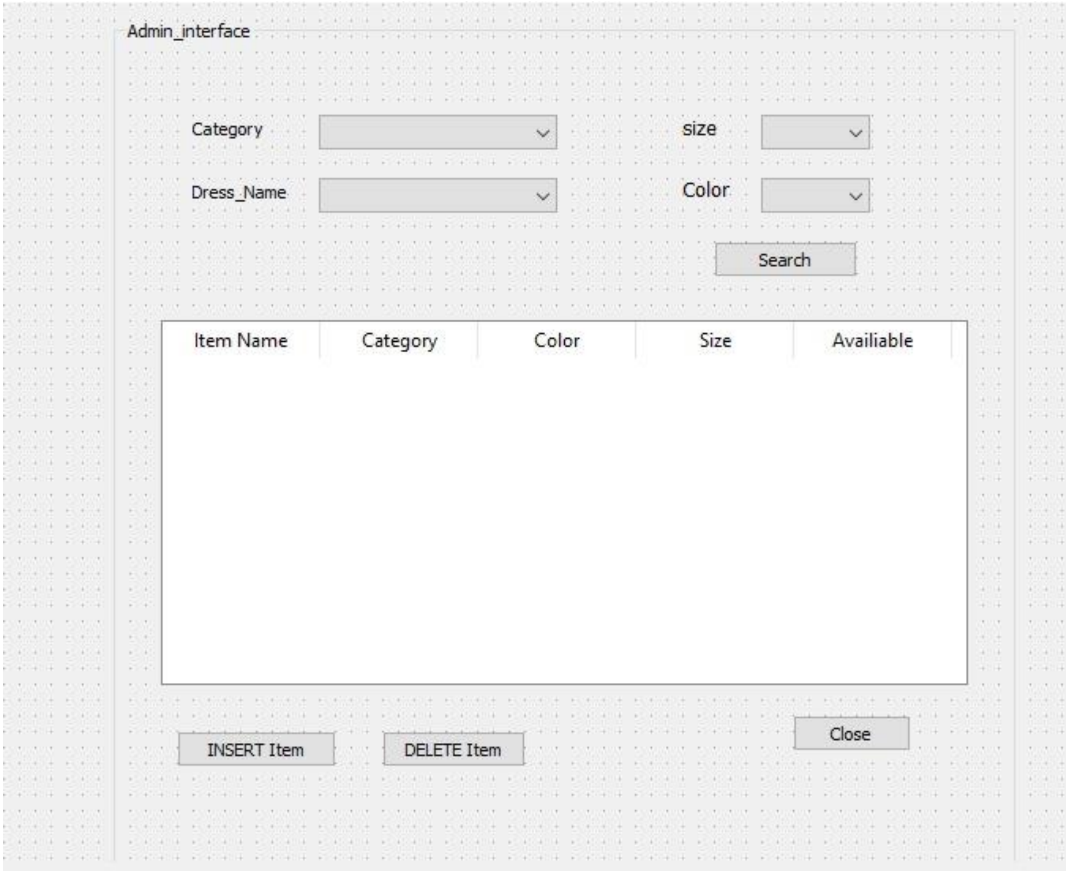
ADMINS VIEW:


MainWindow - untitled*
Items
ItemID
Description
Category Type
Orders
OrderID
CustomerID
Total
Order Date
01/01/2000
Customers
CustomerID
Name
Email
CustomerID
Shippers
ShipperID
Name
Contact
ShipperID
Delivery Areas
Area
City
City
Clear
Show


MainWindow - admin_interface2.ui
Type Here
Name
Category
Size
Color
Brand
Quantity
Price
ADD Item



Item Name	Category	Color	Size	Availiable



Item Name	Category	Color	Size	Availiable

Admin Product Management Screen:

User Action (Admin):

Viewing, adding, or deleting products from the database. Changing descriptions, prices, or other details.

Corresponding Database Operations:

Viewing Products:

Queries the Items table to display all available products.

Adding /Deleting Products:

Adding: Inserts new entries into the Items table with details like name, description, price, category, etc.

Editing: Updates existing entries in the Items table to modify descriptions, prices, or any other product details. (optional for now)

Deleting: Removes selected products from the Items table.

Admin Dashboard Screen for Viewing/Editing:

User Action (Admin):

Accessing a dashboard to view/edit products, orders, customers, delivery areas, and shippers.

Corresponding Database Operations:

Viewing Orders/Customers/Delivery Areas/Shippers:

Queries respective tables (Orders, Users, Delivery_Areas, Shippers) to display relevant information to the admin.

Editing Orders/Customers/Delivery Areas/Shippers:

For editing, updates are performed directly in the respective tables based on the modifications made by the admin.

Database Operations Summary:

Admin Product Management: Involves Create, Read(by default queries all the data), Update(optional for now), Delete) operations in the Items table.

Admin Dashboard: Displays information by querying relevant tables and allows editing by directly updating the data in the respective tables.

These screens interact with multiple tables in the database, enabling the admin to manage products, orders, customers, delivery areas, and shippers efficiently by performing operations like viewing, adding, editing, and deleting records as needed.