SVKM's NMIMS
School of Technology Management & Engineering, Chandigarh
A.Y. 2023 - 24
Course: Database Management Systems

Project Report

Program	BTech Integrated	
Semester	VIII	
Name of the Project:	Furniture Website Database	
Details of Project Members		
Batch	Roll No.	Name
C1	C080	Aalia Fatema Dandawala
	C097	Anikait Yadav
	C074	Soham Agarwal
Date of Submission: 3rd April 2024		

Contribution of each project Members:

Roll No.	Name:	Contribution
C080	Aalia Fatema Dandawala	SQL queries and normalization
C097	Anikait Yadav	Relational Model
C074	Soham Agarwal	ER

Github link of your project: https://github.com/aaliafatema/dbmsproj

Rubrics for the Project evaluation:

First phase of evaluation: Innovative Ideas (5 Marks) Design and Partial implementation (5 Marks)	10 marks
Final phase of evaluation Implementation, presentation and viva, Self-Learning and Learning Beyond classroom	10 marks

Project Report

Selected Topic

by

Aalia Fatema Dandawala, Roll number: C080

Anikait Yadav, Roll number: C097

Soham Agarwal, Roll number: C074

Course: DBMS

AY: 2023-24

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I. Storyline

In the bustling world of online retail, a team of passionate furniture enthusiasts embarks on a journey to create the ultimate modern furniture e-commerce platform. Their goal is to revolutionize the way people shop for furniture by providing a seamless and enjoyable shopping experience from the comfort of their homes.

The journey begins with extensive market research and analysis to identify the growing demand for contemporary and stylish furniture pieces. Armed with insights into consumer preferences and trends, the team sets out to curate a diverse collection of high-quality furniture items that cater to various tastes and lifestyles.

With the product lineup finalized, attention turns to creating a robust database infrastructure to support the platform's operations. The database must efficiently manage product information, customer data, orders, payments, and reviews while ensuring scalability and performance to accommodate future growth.

The team designs a relational database schema tailored to the needs of the e-commerce platform. Tables are meticulously crafted to store detailed product descriptions, pricing information, customer profiles, order histories, and reviews. Relationships between tables are established to facilitate seamless data retrieval and manipulation.

As development progresses, the platform begins to take shape, with sleek user interfaces designed to showcase products effectively and provide intuitive navigation for shoppers. Advanced search and filtering functionalities are implemented, allowing users to easily find the perfect furniture pieces to complement their spaces.

To enhance the shopping experience further, personalized recommendations and curated collections are introduced, leveraging insights from customer behavior and preferences stored in the database. Real-time inventory management ensures accurate stock levels and prevents overselling, while secure payment gateways guarantee safe and hassle-free transactions.

As the platform goes live, the team monitors its performance closely, gathering feedback from early users to identify areas for improvement. Continuous updates and optimizations are made based on insights derived from the database analytics, ensuring that the platform evolves to meet the evolving needs of its growing customer base.

Driven by their passion for furniture and dedication to innovation, the team's vision becomes a reality as the modern furniture e-commerce platform emerges as a go-to destination for furniture enthusiasts worldwide, transforming the way people shop for furniture in the digital age.

II. Components of Database Design

Entities and Attributes:

Products:
- ProductID (Primary Key)
- Name
- Description
- Price
- Category
- StockQuantity
- Material
- Manufacturer

Customers:
- CustomerID (Primary Key)
- Name
- Email
- Password
- ShippingAddress
- BillingAddress
- PhoneNumber
- PaymentInformation

Orders:
- OrderID (Primary Key)
- CustomerID (Foreign Key referencing Customers)
- OrderDate
- TotalAmount
- PaymentStatus
- DeliveryStatus
- ShippingMethod

OrderItems:
- OrderItemID (Primary Key)
- OrderID (Foreign Key referencing Orders)
- ProductID (Foreign Key referencing Products)
- Quantity
- Price
- Subtotal

Reviews:
- ReviewID (Primary Key)

- ProductID (Foreign Key referencing Products)
- CustomerID (Foreign Key referencing Customers)
- Rating
- ReviewText
- ReviewDate

Relationships:

One-to-Many Relationship between Customers and Orders:
- CustomerID (Customers) -> CustomerID (Orders)
- Cardinality: One Customer can place Many Orders
- Participation: Mandatory (Every Order must belong to a Customer)

One-to-Many Relationship between Orders and OrderItems:
- OrderID (Orders) -> OrderID (OrderItems)
- Cardinality: One Order can have Many Order Items
- Participation: Mandatory (Every Order must have at least one Order Item)

One-to-Many Relationship between Products and OrderItems:
- ProductID (Products) -> ProductID (OrderItems)
- Cardinality: One Product can be included in Many Order Items
- Participation: Optional (A Product may or may not be included in an Order Item)

One-to-Many Relationship between Products and Reviews:
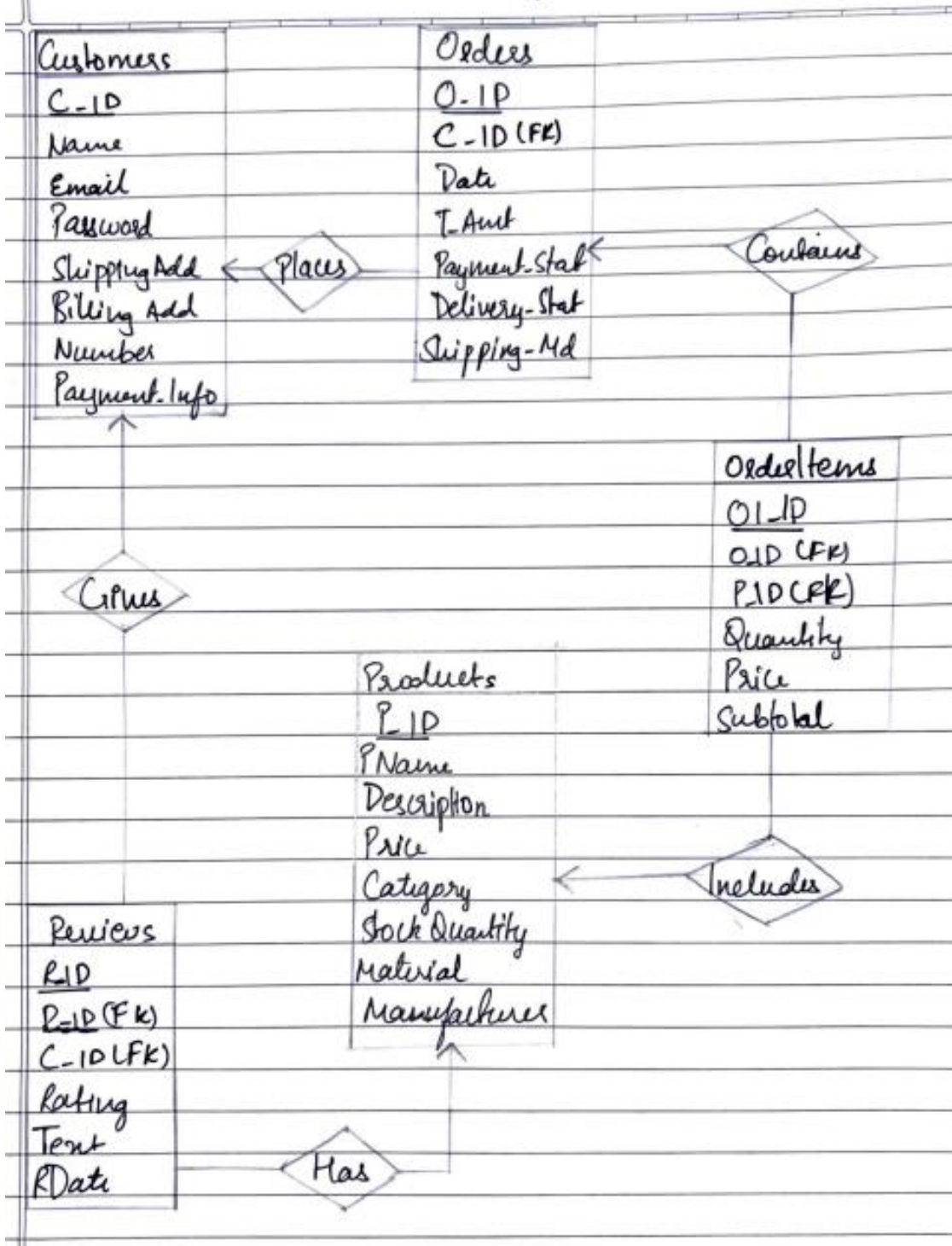- ProductID (Products) -> ProductID (Reviews)
- Cardinality: One Product can have Many Reviews
- Participation: Optional (A Product may or may not have Reviews)

One-to-Many Relationship between Customers and Reviews:
- CustomerID (Customers) -> CustomerID (Reviews)
- Cardinality: One Customer can write Many Reviews
- Participation: Optional (A Customer may or may not write Reviews)

III. Entity Relationship Diagram

DBMS - ER Diagram for Furniture Website

Customers
- C-ID
- Name
- Email
- Password
- Shipping Add
- Billing Add
- Number
- Payment Info

Orders
- O-IP
- C-ID (FK)
- Date
- T-Amt
- Payment-Stat
- Delivery-Stat
- Shipping-Md

Places

Contains

OrderItems
- OI-ID
- OID (FK)
- PID (FK)
- Quantity
- Price
- Subtotal

Gives

Products
- P-ID
- PName
- Description
- Price
- Category
- Stock Quantity
- Material
- Manufacturer

Includes

Reviews
- RID
- P-ID (FK)
- C-ID (FK)
- Rating
- Text
- RDate

Has

IV. Relational Model

Customer

C_ID	Name	Email	Password	Shipping_add	Billing_Add	Number	Payment_Info

Orders

O_ID	C_ID	Date	Total_Amt	Payment_Status	Delivery_Status	Shipping_Method

Order Items

OI_ID	O_ID	P_ID	Quantity	Price	Subtotal

Products

P_ID	Pname	Description	Price	Category	Stock Quantity	Material	Manufacturer

Reviews

R_ID	P_ID	C_ID	Rating	Text	Rdate

V. Normalization

Products

P_ID	Pname	Description	Price	Category	Stock Quantity	Material	Manufacturer

Already in 1NF, 2NF, 3NF, BCNF

Customer

C_ID	Name	Email	Password	Shipping_add	Billing_Add	Number	Payment_Info

Already in 1NF, 2NF, 3NF, BCNF

Orders

O_ID	C_ID	Date	Total_Amt	Payment_Status	Delivery_Status	Shipping_Method

Already in 1NF, 2NF, 3NF, BCNF

Order Items

OI_ID	O_ID	P_ID	Quantity	Price	Subtotal

Already in 1NF, 2NF, 3NF, BCNF

Reviews

R_ID	P_ID	C_ID	Rating	Text	Rdate

Already in 1NF, 2NF, 3NF, BCNF

VI. SQL Queries

```sql
CREATE TABLE furniture.Products (
    ID INT AUTO_INCREMENT PRIMARY KEY,
    Name VARCHAR(255),
    Description TEXT,
    Price DECIMAL(10, 2),
    Category VARCHAR(100),
    StockQuantity INT,
    Material VARCHAR(100),
    Manufacturer VARCHAR(255)
);

CREATE TABLE furniture.Customers (
    ID INT AUTO_INCREMENT PRIMARY KEY,
    Name VARCHAR(255),
    Email VARCHAR(255),
    Password VARCHAR(255),
    ShippingAddress TEXT,
    BillingAddress TEXT,
    PhoneNumber VARCHAR(20),
    PaymentInformation TEXT
);

CREATE TABLE furniture.Orders (
    OrderID INT AUTO_INCREMENT PRIMARY KEY,
    CustomerID INT,
    OrderDate DATE,
    TotalAmount DECIMAL(10, 2),
    PaymentStatus VARCHAR(50),
    DeliveryStatus VARCHAR(50),
    ShippingMethod VARCHAR(100),
    FOREIGN KEY (CustomerID) REFERENCES furniture.Customers(ID)
);

CREATE TABLE furniture.OrderItems (
    OrderItemID INT AUTO_INCREMENT PRIMARY KEY,
    OrderID INT,
    ProductID INT,
    Quantity INT,
    Price DECIMAL(10, 2),
    Subtotal DECIMAL(10, 2),
    FOREIGN KEY (OrderID) REFERENCES furniture.Orders(OrderID),
    FOREIGN KEY (ProductID) REFERENCES furniture.Products(ID)
);
```

```sql
CREATE TABLE furniture.Reviews (
    ReviewID INT AUTO_INCREMENT PRIMARY KEY,
    ProductID INT,
    CustomerID INT,
    Rating INT,
    ReviewText TEXT,
    ReviewDate DATE,
    FOREIGN KEY (ProductID) REFERENCES furniture.Products(ID),
    FOREIGN KEY (CustomerID) REFERENCES furniture.Customers(ID)
);
```

Adding values:
```sql
INSERT INTO furniture.Products (Name, Description, Price, Category, StockQuantity, Material, Manufacturer) VALUES
('Modern Sectional Sofa', 'Stylish and comfortable sectional sofa with adjustable headrests.', 999.99, 'Sofas', 20, 'Leather', 'XYZ Furniture Co.'),
('Wooden Dining Table', 'Solid wood dining table with a natural finish.', 499.99, 'Tables', 15, 'Oak', 'ABC Furniture Co.'),
('Vintage Armchair', 'Classic armchair with a vintage design, upholstered in high-quality fabric.', 349.99, 'Chairs', 10, 'Fabric', 'Vintage Furniture Ltd.'),
('Contemporary Coffee Table', 'Sleek and minimalist coffee table with a glass top and metal frame.', 199.99, 'Tables', 25, 'Glass', 'Modern Living Designs'),
('Rustic Bookshelf', 'Handcrafted wooden bookshelf with a rustic charm, perfect for displaying books and decor.', 299.99, 'Bookshelves', 12, 'Pine', 'Rustic Home Furnishings'),
('Mid-Century Desk', 'Iconic mid-century modern desk with tapered legs and ample storage space.', 449.99, 'Desks', 8, 'Walnut', 'Retro Designs Inc.'),
('Tufted Ottoman', 'Elegant tufted ottoman with a velvet upholstery, ideal for additional seating or as a footrest.', 149.99, 'Ottomans', 18, 'Velvet', 'Luxury Living Furnishings'),
('Industrial Bar Stool', 'Industrial-style bar stool with a metal frame and wooden seat, perfect for modern kitchens or bars.', 79.99, 'Bar Stools', 30, 'Metal/Wood', 'Urban Loft Furniture'),
('Convertible Futon Sofa Bed', 'Versatile futon sofa bed that easily converts from a sofa to a bed, ideal for small spaces.', 599.99, 'Sofa Beds', 6, 'Microfiber', 'Compact Living Solutions'),
('Marble Dining Table', 'Luxurious dining table featuring a marble top and sturdy wooden legs, adding elegance to any dining room.', 899.99, 'Tables', 10, 'Marble/Wood', 'Elegant Interiors');

INSERT INTO furniture.Customers (Name, Email, Password, ShippingAddress, BillingAddress, PhoneNumber, PaymentInformation) VALUES
('Aalia Dandawala', 'aalia.dandawala@example.com', 'password123', '123 Main St, Cityville, State, ZIP', '123 Main St, Cityville, State, ZIP', '555-123-4567', 'Encrypted payment details'),
('Soham Agarwal', 'soham.agarwal@example.com', 'securepass456', '456 Elm St, Townsville, State, ZIP', '456 Elm St, Townsville, State, ZIP', '555-987-6543', 'Encrypted payment details'),
('Anikait Yadav', 'anikait.yadav@example.com', 'myp@ssw0rd', '789 Oak Ave, Villagetown, State, ZIP', '789 Oak Ave, Villagetown, State, ZIP', '555-555-5555', 'Encrypted payment details'),
('John Doe', 'john.doe@example.com', 'password123', '123 Main St, Cityville, State, ZIP', '123 Main St, Cityville, State, ZIP', '555-123-4567', 'Encrypted payment details'),
```

('Jane Smith', 'jane.smith@example.com', 'securepass456', '456 Elm St, Townsville, State, ZIP', '456 Elm St, Townsville, State, ZIP', '555-987-6543', 'Encrypted payment details'),
('David Johnson', 'david.johnson@example.com', 'myp@ssw0rd', '789 Oak Ave, Villagetown, State, ZIP', '789 Oak Ave, Villagetown, State, ZIP', '555-555-5555', 'Encrypted payment details'),
('Emily Brown', 'emily.brown@example.com', 'password1234', '567 Maple St, Countryside, State, ZIP', '567 Maple St, Countryside, State, ZIP', '555-321-6789', 'Encrypted payment details'),
('Michael Wilson', 'michael.wilson@example.com', 'welc0me!', '901 Pine Ln, Suburbia, State, ZIP', '901 Pine Ln, Suburbia, State, ZIP', '555-888-9999', 'Encrypted payment details'),
('Sarah Garcia', 'sarah.garcia@example.com', 'passw0rd', '345 Cedar Rd, Ruralville, State, ZIP', '345 Cedar Rd, Ruralville, State, ZIP', '555-444-3333', 'Encrypted payment details'),
('Chris Martinez', 'chris.martinez@example.com', 'p@ssword123', '678 Birch Blvd, Foresttown, State, ZIP', '678 Birch Blvd, Foresttown, State, ZIP', '555-222-1111', 'Encrypted payment details');

INSERT INTO furniture.Orders (CustomerID, OrderDate, TotalAmount, PaymentStatus, DeliveryStatus, ShippingMethod) VALUES
(1, '2024-03-29', 999.99, 'Paid', 'Processing', 'Standard'),
(2, '2024-03-28', 1499.98, 'Paid', 'Shipped', 'Expedited'),
(3, '2024-03-27', 699.99, 'Paid', 'Delivered', 'Express'),
(4, '2024-03-26', 399.99, 'Paid', 'Processing', 'Standard'),
(5, '2024-03-25', 1199.99, 'Paid', 'Shipped', 'Expedited'),
(6, '2024-03-24', 799.99, 'Paid', 'Delivered', 'Express'),
(7, '2024-03-23', 599.99, 'Paid', 'Processing', 'Standard'),
(8, '2024-03-22', 899.99, 'Paid', 'Shipped', 'Expedited'),
(9, '2024-03-21', 499.99, 'Paid', 'Delivered', 'Express'),
(10, '2024-03-20', 299.99, 'Paid', 'Processing', 'Standard');

INSERT INTO furniture.OrderItems (OrderID, ProductID, Quantity, Price, Subtotal) VALUES
(1, 1, 1, 999.99, 999.99),
(2, 2, 1, 499.99, 499.99),
(3, 3, 1, 349.99, 349.99),
(4, 4, 1, 199.99, 199.99),
(5, 5, 1, 299.99, 299.99),
(6, 6, 1, 449.99, 449.99),
(7, 7, 1, 149.99, 149.99),
(8, 8, 1, 79.99, 79.99),
(9, 9, 1, 599.99, 599.99),
(10, 10, 1, 899.99, 899.99);

INSERT INTO furniture.Reviews (ProductID, CustomerID, Rating, ReviewText, ReviewDate) VALUES
(1, 1, 5, 'Great sofa, very comfortable and looks amazing in my living room.', '2024-03-30'),
(2, 2, 4, 'Beautiful table, sturdy construction, but took a bit longer to ship than expected.', '2024-03-29'),
(3, 3, 5, 'Love this armchair! The fabric is soft, and it adds a touch of elegance to my home.', '2024-03-28'),
(4, 4, 4, 'Sleek and modern coffee table. It arrived in perfect condition and looks great in my space.', '2024-03-27'),

(5, 5, 3, 'The bookshelf is nice, but the wood is a bit rough in some areas. Overall, satisfied with the purchase.', '2024-03-26'),
(6, 6, 5, 'Absolutely in love with this desk! It fits perfectly in my home office and has ample storage space.', '2024-03-25'),
(7, 7, 4, 'The ottoman is lovely and adds a pop of color to my living room. Its also quite comfortable.', '2024-03-24'),
(8, 8, 3, 'The bar stool looks great in my kitchen, but its not the most comfortable for extended sitting.', '2024-03-23'),
(9, 9, 5, 'This futon sofa bed is a lifesaver for my small apartment. Comfortable for sitting and sleeping!', '2024-03-22'),
(10, 10, 4, 'The marble dining table is stunning and feels very high-quality. Delivery was prompt and assembly was easy.', '2024-03-21');

```
1 •   SELECT * FROM furniture.customers;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: 𝕀A

ID	Name	Email	Password	ShippingAddress	BillingAddress
1	Aalia Dandawala	aalia.dandawala@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, Z
2	Soham Agarwal	soham.agarwal@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State,
3	Anikait Yadav	anikait.yadav@example.com	myp@ssw0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, Sta
4	John Doe	john.doe@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, Z
5	Jane Smith	jane.smith@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State,
6	David Johnson	david.johnson@example.com	myp@ssw0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, Sta
7	Emily Brown	emily.brown@example.com	password1234	567 Maple St, Countryside, State, ZIP	567 Maple St, Countryside, St
8	Michael Wilson	michael.wilson@example.com	welc0me!	901 Pine Ln, Suburbia, State, ZIP	901 Pine Ln, Suburbia, State,
9	Sarah Garcia	sarah.garcia@example.com	passw0rd	345 Cedar Rd, Ruralville, State, ZIP	345 Cedar Rd, Ruralville, Stati
10	Chris Martinez	chris.martinez@example.com	p@ssword123	678 Birch Blvd, Foresttown, State, ZIP	678 Birch Blvd, Foresttown, St
NULL	NULL	NULL	NULL	NULL	NULL

customers 2 ✕

Apply   Rev

	BillingAddress	PhoneNumber	PaymentInformation
	123 Main St, Cityville, State, ZIP	555-123-4567	Encrypted payment details
	456 Elm St, Townsville, State, ZIP	555-987-6543	Encrypted payment details
P	789 Oak Ave, Villagetown, State, ZIP	555-555-5555	Encrypted payment details
	123 Main St, Cityville, State, ZIP	555-123-4567	Encrypted payment details
	456 Elm St, Townsville, State, ZIP	555-987-6543	Encrypted payment details
P	789 Oak Ave, Villagetown, State, ZIP	555-555-5555	Encrypted payment details
IP	567 Maple St, Countryside, State, ZIP	555-321-6789	Encrypted payment details
	901 Pine Ln, Suburbia, State, ZIP	555-888-9999	Encrypted payment details
	345 Cedar Rd, Ruralville, State, ZIP	555-444-3333	Encrypted payment details
ZIP	678 Birch Blvd, Foresttown, State, ZIP	555-222-1111	Encrypted payment details
	NULL	NULL	NULL

Result Grid

Form Editor

Field Types

```
1 •    SELECT * FROM furniture.orderitems;
```

Result Grid | Filter Rows: | Edit: | Export/Import: |

OrderItemID	OrderID	ProductID	Quantity	Price	Subtotal
1	1	1	1	999.99	999.99
2	2	2	1	499.99	499.99
3	3	3	1	349.99	349.99
4	4	4	1	199.99	199.99
5	5	5	1	299.99	299.99
6	6	6	1	449.99	449.99
7	7	7	1	149.99	149.99
8	8	8	1	79.99	79.99
9	9	9	1	599.99	599.99
10	10	10	1	899.99	899.99
NULL	NULL	NULL	NULL	NULL	NULL

```
1 •    SELECT * FROM furniture.orderitems;
```

Result Grid | Filter Rows: | Edit: | Export

OrderItemID	OrderID	ProductID	Quantity	Price	Subtotal
1	1	1	1	999.99	999.99
2	2	2	1	499.99	499.99
3	3	3	1	349.99	349.99
4	4	4	1	199.99	199.99
5	5	5	1	299.99	299.99
6	6	6	1	449.99	449.99
7	7	7	1	149.99	149.99
8	8	8	1	79.99	79.99
9	9	9	1	599.99	599.99
10	10	10	1	899.99	899.99
NULL	NULL	NULL	NULL	NULL	NULL

Limit to 1000 rows

```
1 •    SELECT * FROM furniture.orders;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

OrderID	CustomerID	OrderDate	TotalAmount	PaymentStatus	DeliveryStatus	ShippingMethod
1	1	2024-03-29	999.99	Paid	Processing	Standard
2	2	2024-03-28	1499.98	Paid	Shipped	Expedited
3	3	2024-03-27	699.99	Paid	Delivered	Express
4	4	2024-03-26	399.99	Paid	Processing	Standard
5	5	2024-03-25	1199.99	Paid	Shipped	Expedited
6	6	2024-03-24	799.99	Paid	Delivered	Express
7	7	2024-03-23	599.99	Paid	Processing	Standard
8	8	2024-03-22	899.99	Paid	Shipped	Expedited
9	9	2024-03-21	499.99	Paid	Delivered	Express
10	10	2024-03-20	299.99	Paid	Processing	Standard
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
1 •    SELECT * FROM furniture.products;
```


ID	Name	Description	Price	Category	StockQuantity	Material	
1	Modern Sectional Sofa	Stylish and comfortable sectional sofa with adju...	999.99	Sofas	20	Leather	X
2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables	15	Oak	A
3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric	V
4	Contemporary Coffee Table	Sleek and minimalist coffee table with a glass to...	199.99	Tables	25	Glass	M
5	Rustic Bookshelf	Handcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine	R
6	Mid-Century Desk	Iconic mid-century modern desk with tapered le...	449.99	Desks	8	Walnut	R
7	Tufted Ottoman	Elegant tufted ottoman with a velvet upholster...	149.99	Ottomans	18	Velvet	L
8	Industrial Bar Stool	Industrial-style bar stool with a metal frame and...	79.99	Bar Stools	30	Metal/Wood	L
9	Convertible Futon Sofa Bed	Versatile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfiber	C
10	Marble Dining Table	Luxurious dining table featuring a marble top an...	899.99	Tables	10	Marble/Wood	E
NULL	NULL	NULL	NULL	NULL	NULL	NULL	

```
1 •    SELECT * FROM furniture.reviews;
```


ReviewID	ProductID	CustomerID	Rating	ReviewText	ReviewDate
1	1	1	5	Great sofa, very comfortable and looks amazing...	2024-03-30
2	2	2	4	Beautiful table, sturdy construction, but took a ...	2024-03-29
3	3	3	5	Love this armchair! The fabric is soft, and it add...	2024-03-28
4	4	4	4	Sleek and modern coffee table. It arrived in per...	2024-03-27
5	5	5	3	The bookshelf is nice, but the wood is a bit roug...	2024-03-26
6	6	6	5	Absolutely in love with this desk! It fits perfectl...	2024-03-25
7	7	7	4	The ottoman is lovely and adds a pop of color t...	2024-03-24
8	8	8	3	The bar stool looks great in my kitchen, but its n...	2024-03-23
9	9	9	5	This futon sofa bed is a lifesaver for my small a...	2024-03-22
10	10	10	4	The marble dining table is stunning and feels ve...	2024-03-21
NULL	NULL	NULL	NULL	NULL	NULL

Queries:
SELECT * FROM furniture.Products WHERE Price BETWEEN 200 AND 500;

	ID	Name	Description	Price	Category	StockQuantity	Material	Manufacture
▶	2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables	15	Oak	ABC Furniture
	3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric	Vintage Furni
	5	Rustic Bookshelf	Handcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine	Rustic Home F
	6	Mid-Century Desk	Iconic mid-century modern desk with tapered le...	449.99	Desks	8	Walnut	Retro Designs
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

SELECT * FROM furniture.Customers WHERE Name LIKE 'J%' OR Name LIKE 'S%';

	ID	Name	Email	Password	ShippingAddress	BillingAddress
▶	2	Soham Agarwal	soham.agarwal@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State, ZIP
	4	John Doe	john.doe@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, ZIP
	5	Jane Smith	jane.smith@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State, ZIP
	9	Sarah Garcia	sarah.garcia@example.com	passw0rd	345 Cedar Rd, Ruralville, State, ZIP	345 Cedar Rd, Ruralville, State, ZII
*	NULL	NULL	NULL	NULL	NULL	NULL

SELECT * FROM furniture.Orders WHERE CustomerID IN (1, 3, 5);

	OrderID	CustomerID	OrderDate	TotalAmount	PaymentStatus	DeliveryStatus	ShippingMethod
▶	1	1	2024-03-29	999.99	Paid	Processing	Standard
	3	3	2024-03-27	699.99	Paid	Delivered	Express
	5	5	2024-03-25	1199.99	Paid	Shipped	Expedited
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

SELECT * FROM furniture.OrderItems WHERE Quantity > 1;

	OrderItemID	OrderID	ProductID	Quantity	Price	Subtotal
*	NULL	NULL	NULL	NULL	NULL	NULL

UPDATE furniture.Products SET Price = 1099.99 WHERE ID = 1;

	ID	Name	Description	Price	Category
▶	1	Modern Sectional Sofa	Stylish and comfortable sectional sofa with adju...	1099.99	Sofas
	2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables
	3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs

DELETE FROM furniture.OrderItems WHERE OrderItemID = 1;

	OrderItemID	OrderID	ProductID	Quantity	Price	Subtotal
▶	2	2	2	1	499.99	499.99
	3	3	3	1	349.99	349.99
	4	4	4	1	199.99	199.99
	5	5	5	1	299.99	299.99
	6	6	6	1	449.99	449.99

SELECT p.*, r.* FROM furniture.Products p LEFT JOIN furniture.Reviews r ON p.ID = r.ProductID;

	ID	Name	Description	Price	Category	StockQuantity	Material
▶	1	Modern Sectional Sofa	Stylish and comfortable sectional sofa with adju...	1099.99	Sofas	20	Leather
	2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables	15	Oak
	3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric
	4	Contemporary Coffee Table	Sleek and minimalist coffee table with a glass to...	199.99	Tables	25	Glass
	5	Rustic Bookshelf	Handcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine
	6	Mid-Century Desk	Iconic mid-century modern desk with tapered le...	449.99	Desks	8	Walnut
	7	Tufted Ottoman	Elegant tufted ottoman with a velvet upholster...	149.99	Ottomans	18	Velvet
	8	Industrial Bar Stool	Industrial-style bar stool with a metal frame and...	79.99	Bar Stools	30	Metal/Wood
	9	Convertible Futon Sofa Bed	Versatile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfiber
	10	Marble Dining Table	Luxurious dining table featuring a marble top an...	899.99	Tables	10	Marble/Wood

Material	Manufacturer	ReviewID	ProductID	CustomerID	Rating	ReviewText	Rev
Leather	XYZ Furniture Co.	1	1	1	5	Great sofa, very comfortable and looks amazing...	2024
Oak	ABC Furniture Co.	2	2	2	4	Beautiful table, sturdy construction, but took a ...	2024
Fabric	Vintage Furniture Ltd.	3	3	3	5	Love this armchair! The fabric is soft, and it add...	2024
Glass	Modern Living Designs	4	4	4	4	Sleek and modern coffee table. It arrived in per...	2024
Pine	Rustic Home Furnishings	5	5	5	3	The bookshelf is nice, but the wood is a bit roug...	2024
Walnut	Retro Designs Inc.	6	6	6	5	Absolutely in love with this desk! It fits perfectl...	2024
Velvet	Luxury Living Furnishings	7	7	7	4	The ottoman is lovely and adds a pop of color t...	2024
Metal/Wood	Urban Loft Furniture	8	8	8	3	The bar stool looks great in my kitchen, but its n...	2024
Microfiber	Compact Living Solutions	9	9	9	5	This futon sofa bed is a lifesaver for my small a...	2024
Marble/Wood	Elegant Interiors	10	10	10	4	The marble dining table is stunning and feels ve...	2024

SELECT p.*, COUNT(r.ReviewID) AS TotalReviews
FROM furniture.Products p LEFT JOIN furniture.Reviews r ON p.ID = r.ProductID

GROUP BY p.ID;

ID	Name	Description	Price	Category	StockQuantity	Material
1	Modern Sectional Sofa	Stylish and comfortable sectional sofa with adju...	1099.99	Sofas	20	Leather
2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables	15	Oak
3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric
4	Contemporary Coffee Table	Sleek and minimalist coffee table with a glass to...	199.99	Tables	25	Glass
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9	Convertible Futon Sofa Bed	Versatile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfiber
10	Marble Dining Table	Luxurious dining table featuring a marble top an...	899.99	Tables	10	Marble/Wood

cription	Price	Category	StockQuantity	Material	Manufacturer	TotalReviews
sh and comfortable sectional sofa with adju...	1099.99	Sofas	20	Leather	XYZ Furniture Co.	1
wood dining table with a natural finish.	499.99	Tables	15	Oak	ABC Furniture Co.	1
sic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric	Vintage Furniture Ltd.	1
k and minimalist coffee table with a glass to...	199.99	Tables	25	Glass	Modern Living Designs	1
dcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine	Rustic Home Furnishings	1
c mid-century modern desk with tapered le...	449.99	Desks	8	Walnut	Retro Designs Inc.	1
ant tufted ottoman with a velvet upholster...	149.99	Ottomans	18	Velvet	Luxury Living Furnishings	1
strial-style bar stool with a metal frame and...	79.99	Bar Stools	30	Metal/Wood	Urban Loft Furniture	1
atile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfiber	Compact Living Solutions	1
rious dining table featuring a marble top an...	899.99	Tables	10	Marble/Wood	Elegant Interiors	1

SELECT c.*, COUNT(o.OrderID) AS TotalOrders
FROM furniture.Customers c INNER JOIN furniture.Orders o ON c.ID = o.CustomerID
GROUP BY c.ID
HAVING TotalOrders > 2;

ID	Name	Email	Password	ShippingAddress	BillingAddress	PhoneNumber	PaymentInformation	TotalOrders

SELECT p.*, AVG(r.Rating) AS AvgRating
FROM furniture.Products p LEFT JOIN furniture.Reviews r ON p.ID = r.ProductID

GROUP BY p.ID;

ID	Name	Description	Price	Category	StockQuantity	Material
1	Modern Sectional Sofa	Stylish and comfortable sectional sofa with adju...	1099.99	Sofas	20	Leather
2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables	15	Oak
3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric
4	Contemporary Coffee Table	Sleek and minimalist coffee table with a glass to...	199.99	Tables	25	Glass
5	Rustic Bookshelf	Handcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine
6	Mid-Century Desk	Iconic mid-century modern desk with tapered le...	449.99	Desks	8	Walnut
7	Tufted Ottoman	Elegant tufted ottoman with a velvet upholster...	149.99	Ottomans	18	Velvet
8	Industrial Bar Stool	Industrial-style bar stool with a metal frame and...	79.99	Bar Stools	30	Metal/Wood
9	Convertible Futon Sofa Bed	Versatile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfiber
10	Marble Dining Table	Luxurious dining table featuring a marble top an...	899.99	Tables	10	Marble/Wood

Description	Price	Category	StockQuantity	Material	Manufacturer	AvgRating
tylish and comfortable sectional sofa with adju...	1099.99	Sofas	20	Leather	XYZ Furniture Co.	5.0000
olid wood dining table with a natural finish.	499.99	Tables	15	Oak	ABC Furniture Co.	4.0000
assic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric	Vintage Furniture Ltd.	5.0000
eek and minimalist coffee table with a glass to...	199.99	Tables	25	Glass	Modern Living Designs	4.0000
andcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine	Rustic Home Furnishings	3.0000
onic mid-century modern desk with tapered le...	449.99	Desks	8	Walnut	Retro Designs Inc.	5.0000
egant tufted ottoman with a velvet upholster...	149.99	Ottomans	18	Velvet	Luxury Living Furnishings	4.0000
dustrial-style bar stool with a metal frame and...	79.99	Bar Stools	30	Metal/Wood	Urban Loft Furniture	3.0000
ersatile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfiber	Compact Living Solutions	5.0000
uxurious dining table featuring a marble top an...	899.99	Tables	10	Marble/Wood	Elegant Interiors	4.0000

SELECT c.*, SUM(o.TotalAmount) AS TotalSpent
FROM furniture.Customers c INNER JOIN furniture.Orders o ON c.ID = o.CustomerID
GROUP BY c.ID;

ID	Name	Email	Password	ShippingAddress	BillingAddress
1	Aalia Dandawala	aalia.dandawala@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State
2	Soham Agarwal	soham.agarwal@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, Stat
3	Anikait Yadav	anikait.yadav@example.com	myp@ssw0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, S
4	John Doe	john.doe@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State
5	Jane Smith	jane.smith@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, Stat
6	David Johnson	david.johnson@example.com	myp@ssw0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, S
7	Emily Brown	emily.brown@example.com	password1234	567 Maple St, Countryside, State, ZIP	567 Maple St, Countryside,
8	Michael Wilson	michael.wilson@example.com	welc0me!	901 Pine Ln, Suburbia, State, ZIP	901 Pine Ln, Suburbia, State
9	Sarah Garcia	sarah.garcia@example.com	passw0rd	345 Cedar Rd, Ruralville, State, ZIP	345 Cedar Rd, Ruralville, St
10	Chris Martinez	chris.martinez@example.com	p@ssword123	678 Birch Blvd, Foresttown, State, ZIP	678 Birch Blvd, Foresttown,

	ShippingAddress	BillingAddress	PhoneNumber	PaymentInformation	TotalSpent
123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, ZIP	555-123-4567	Encrypted payment details	999.99
s456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State, ZIP	555-987-6543	Encrypted payment details	1499.98
0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, State, ZIP	555-555-5555	Encrypted payment details	699.99
123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, ZIP	555-123-4567	Encrypted payment details	399.99
s456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State, ZIP	555-987-6543	Encrypted payment details	1199.99
0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, State, ZIP	555-555-5555	Encrypted payment details	799.99
1234	567 Maple St, Countryside, State, ZIP	567 Maple St, Countryside, State, ZIP	555-321-6789	Encrypted payment details	599.99
	901 Pine Ln, Suburbia, State, ZIP	901 Pine Ln, Suburbia, State, ZIP	555-888-9999	Encrypted payment details	899.99
	345 Cedar Rd, Ruralville, State, ZIP	345 Cedar Rd, Ruralville, State, ZIP	555-444-3333	Encrypted payment details	499.99
123	678 Birch Blvd, Foresttown, State, ZIP	678 Birch Blvd, Foresttown, State, ZIP	555-222-1111	Encrypted payment details	299.99

SELECT * FROM furniture.Customers WHERE ID NOT IN (SELECT DISTINCT CustomerID FROM furniture.Orders);

ID	Name	Email	Password	ShippingAddress	BillingAddress	PhoneNumber	PaymentInformation
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

UPDATE furniture.Products SET StockQuantity = StockQuantity + 10 WHERE ID = 2;

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: IA

ID	Name	Description	Price	Category	StockQuantity	Materia
1	Modern Sectional Sofa	Stylish and comfortable sectional sofa with adju...	1099.99	Sofas	20	Leather
2	Wooden Dining Table	Solid wood dining table with a natural finish.	499.99	Tables	25	Oak
3	Vintage Armchair	Classic armchair with a vintage design, upholste...	349.99	Chairs	10	Fabric
4	Contemporary Coffee Table	Sleek and minimalist coffee table with a glass to...	199.99	Tables	25	Glass
5	Rustic Bookshelf	Handcrafted wooden bookshelf with a rustic ch...	299.99	Bookshelves	12	Pine
6	Mid-Century Desk	Iconic mid-century modern desk with tapered le...	449.99	Desks	8	Walnut
7	Tufted Ottoman	Elegant tufted ottoman with a velvet upholster...	149.99	Ottomans	18	Velvet
8	Industrial Bar Stool	Industrial-style bar stool with a metal frame and...	79.99	Bar Stools	30	Metal/M
9	Convertible Futon Sofa Bed	Versatile futon sofa bed that easily converts fro...	599.99	Sofa Beds	6	Microfib
10	Marble Dining Table	Luxurious dining table featuring a marble top an...	899.99	Tables	10	Marble/
NULL	NULL	NULL	NULL	NULL	NULL	NULL

SELECT * FROM furniture.Orders WHERE TotalAmount > 1000;

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: IA

OrderID	CustomerID	OrderDate	TotalAmount	PaymentStatus	DeliveryStatus	ShippingMethod
2	2	2024-03-28	1499.98	Paid	Shipped	Expedited
5	5	2024-03-25	1199.99	Paid	Shipped	Expedited
NULL	NULL	NULL	NULL	NULL	NULL	NULL

SELECT DISTINCT c.* FROM furniture.Customers c INNER JOIN furniture.Orders o ON c.ID = o.CustomerID WHERE YEAR(OrderDate) = 2024 AND MONTH(OrderDate) = 3;

ID	Name	Email	Password	ShippingAddress	BillingAddress
1	Aalia Dandawala	aalia.dandawala@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, Z
2	Soham Agarwal	soham.agarwal@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State,
3	Anikait Yadav	anikait.yadav@example.com	myp@ssw0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, Sta
4	John Doe	john.doe@example.com	password123	123 Main St, Cityville, State, ZIP	123 Main St, Cityville, State, Z
5	Jane Smith	jane.smith@example.com	securepass456	456 Elm St, Townsville, State, ZIP	456 Elm St, Townsville, State,
6	David Johnson	david.johnson@example.com	myp@ssw0rd	789 Oak Ave, Villagetown, State, ZIP	789 Oak Ave, Villagetown, Sta
7	Emily Brown	emily.brown@example.com	password1234	567 Maple St, Countryside, State, ZIP	567 Maple St, Countryside, St
8	Michael Wilson	michael.wilson@example.com	welc0me!	901 Pine Ln, Suburbia, State, ZIP	901 Pine Ln, Suburbia, State,
9	Sarah Garcia	sarah.garcia@example.com	passw0rd	345 Cedar Rd, Ruralville, State, ZIP	345 Cedar Rd, Ruralville, State
10	Chris Martinez	chris.martinez@example.com	p@ssword123	678 Birch Blvd, Foresttown, State, ZIP	678 Birch Blvd, Foresttown, St

ess	BillingAddress	PhoneNumber	PaymentInformation
ityville, State, ZIP	123 Main St, Cityville, State, ZIP	555-123-4567	Encrypted payment details
wnsville, State, ZIP	456 Elm St, Townsville, State, ZIP	555-987-6543	Encrypted payment details
Villagetown, State, ZIP	789 Oak Ave, Villagetown, State, ZIP	555-555-5555	Encrypted payment details
ityville, State, ZIP	123 Main St, Cityville, State, ZIP	555-123-4567	Encrypted payment details
wnsville, State, ZIP	456 Elm St, Townsville, State, ZIP	555-987-6543	Encrypted payment details
Villagetown, State, ZIP	789 Oak Ave, Villagetown, State, ZIP	555-555-5555	Encrypted payment details
Countryside, State, ZIP	567 Maple St, Countryside, State, ZIP	555-321-6789	Encrypted payment details
uburbia, State, ZIP	901 Pine Ln, Suburbia, State, ZIP	555-888-9999	Encrypted payment details
Ruralville, State, ZIP	345 Cedar Rd, Ruralville, State, ZIP	555-444-3333	Encrypted payment details
Foresttown, State, ZIP	678 Birch Blvd, Foresttown, State, ZIP	555-222-1111	Encrypted payment details

```sql
SELECT ShippingMethod, COUNT(OrderID) AS TotalOrders
FROM furniture.Orders
GROUP BY ShippingMethod;
```

ShippingMethod	TotalOrders
Standard	4
Expedited	3
Express	3

```sql
SELECT * FROM furniture.Customers WHERE PhoneNumber LIKE '%9999';
```

	Password	ShippingAddress	BillingAddress	PhoneNumber	PaymentInformation
n@example.com	welc0me!	901 Pine Ln, Suburbia, State, ZIP	901 Pine Ln, Suburbia, State, ZIP	555-888-9999	Encrypted payment details
*	NULL	NULL	NULL	NULL	NULL

ALTER TABLE furniture.Products ADD COLUMN Discount DECIMAL(10, 2);

Wrap Cell Content:	
Manufacturer	Discount
XYZ Furniture Co.	NULL
ABC Furniture Co.	NULL
Vintage Furniture Ltd.	NULL
Modern Living Designs	NULL
Rustic Home Furnishings	NULL
Retro Designs Inc.	NULL
Luxury Living Furnishings	NULL
Urban Loft Furniture	NULL
Compact Living Solutions	NULL
Elegant Interiors	NULL
NULL	NULL

VII. Project demonstration

This section delves into the design and management of the furniture database, emphasizing the creation of a robust structure to support the storage and retrieval of furniture-related data.

Database Design:
The furniture database was meticulously crafted using MySQL Workbench, with tables representing key entities such as products, customers, orders, and reviews. Each table was structured to accommodate attributes specific to the furniture domain, such as product dimensions, materials, and manufacturers.

Data Population:
Realistic datasets comprising furniture products, customer information, and order details were imported into the database. This ensured that the database could effectively handle diverse furniture-related data and facilitate comprehensive testing of the schema.

Querying and Manipulating Data:
A variety of SQL queries and operations were executed on the database to showcase its functionality. This included retrieving product information, processing orders, and analyzing customer reviews to derive valuable insights.

Database Management:
MySQL Workbench served as a pivotal tool for managing the furniture database. It provided a user-friendly interface for schema visualization, query execution, and performance optimization, enabling seamless database administration.

VIII. Self -Learning beyond classroom
:

- Advanced SQL Techniques:

Delved into advanced SQL techniques such as complex joins, subqueries, recursive queries, and window functions to enhance my data manipulation skills.

- Database Optimization Strategies:

Explored database optimization strategies, including indexing, query optimization, and database tuning, to improve performance and efficiency.

- Database Administration Skills:

Deepened my understanding of database administration tasks such as backup and recovery, disaster recovery planning, and database security beyond the basics covered in class.

- Data Governance and Compliance:

Explored data governance frameworks, data quality management, and regulatory compliance requirements to ensure adherence to data privacy regulations such as GDPR and CCPA.

- Professional Development and Networking:

Engaged in professional development activities such as attending industry conferences, networking events, and online forums to stay updated on industry trends and build connections within the community.

IX. Learning from the Project

Undertaking this project has been a significant learning experience, providing valuable insights and skills that have contributed to our personal and professional development. Some of the key ways this project has helped us include:

- Hands-On Application of Concepts:

The project allowed us to apply theoretical concepts learned in the classroom to real-world scenarios. This hands-on experience deepened our understanding of database management principles and techniques.

- Problem-Solving Skills:

Throughout the project, we encountered various challenges and obstacles that required creative problem-solving skills. Addressing these challenges helped us develop resilience, adaptability, and critical thinking abilities.

- Collaboration and Communication:

Collaborating with team members and stakeholders on the project improved our communication and collaboration skills. It taught us the importance of effective communication, teamwork, and interpersonal relationships in achieving project goals.

- Project Management Skills:

Managing the project from conception to completion enhanced our project management skills. We learned to set clear objectives, establish timelines, allocate resources effectively, and monitor progress to ensure successful project delivery.

- Technical Proficiency:

Working on the project improved our technical proficiency in database design, development, and management. We gained hands-on experience with database tools and technologies, honing our skills in SQL, data modeling, and database administration.

- Continuous Learning:

The project exposed us to new technologies, methodologies, and best practices in the field of database management. It instilled in us a mindset of continuous learning and growth, motivating us to stay updated on emerging trends and advancements in the industry.

- Professional Development:

Engaging in the project enhanced our professional development by expanding our portfolio, demonstrating our skills and expertise to potential employers, and providing us with practical experience that is highly valued in the industry.

X. Challenges Faced

- Data Modeling: Designing a comprehensive database schema that accurately represented furniture-related entities and relationships was challenging.

- Security and Compliance: Implementing robust security measures and ensuring compliance with data privacy regulations posed challenges.

- Team Collaboration: Collaborating effectively with team members and stakeholders required clear communication and efficient project management.

- Technical Constraints: Limited resources, including hardware, software, and budget constraints, posed challenges in deploying and managing the database environment.

- Adapting to Changes: Managing changes in requirements, scope, and priorities required flexibility and adaptability.

XI. Conclusion

- Practical Application of Knowledge: The project provided an opportunity to apply theoretical concepts learned in the classroom to real-world scenarios, reinforcing our understanding of database management principles.

- Problem-Solving Skills: Overcoming challenges during the project, such as data modeling complexities and performance optimization issues, honed our problem-solving abilities and fostered resilience in the face of obstacles.

- Team Collaboration: Collaborating with team members and stakeholders highlighted the importance of clear communication, effective delegation, and mutual respect in achieving project objectives.

- Continuous Learning: Engaging in the project fueled a passion for continuous learning, prompting us to explore new technologies, methodologies, and best practices in the ever-evolving field of database management.

- Professional Growth: The project served as a platform for professional growth, expanding our portfolio, enhancing our technical proficiency, and preparing us for future challenges in the workforce.

- In conclusion, the project was not only a means to fulfill academic requirements but also a journey of personal and professional development, equipping us with valuable skills and experiences that will serve us well in our future endeavors.