



Course: AT82.02 Data Modeling and Management
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Dynamic Online Marketplace

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What is Dynamic Online Marketplace ?

Dynamic Online Marketplace is an online shopping app. It offers two selling options: "Selling" and "Auctioning," distinguishing it from other Thai apps. Which only have one option.

Under "Selling," products are categorized as "First-hand," "Second-hand," or "Antique," each with its own marketplace. Our "Auctioning" feature provides a full auction service for users



Need of the Project

Giving sellers more options, offer two ways to sell products: "Selling" and "Auctioning"

**Seller's
Playground**

Each category gets its own special marketplace. Ensuring everyone finds what they love.

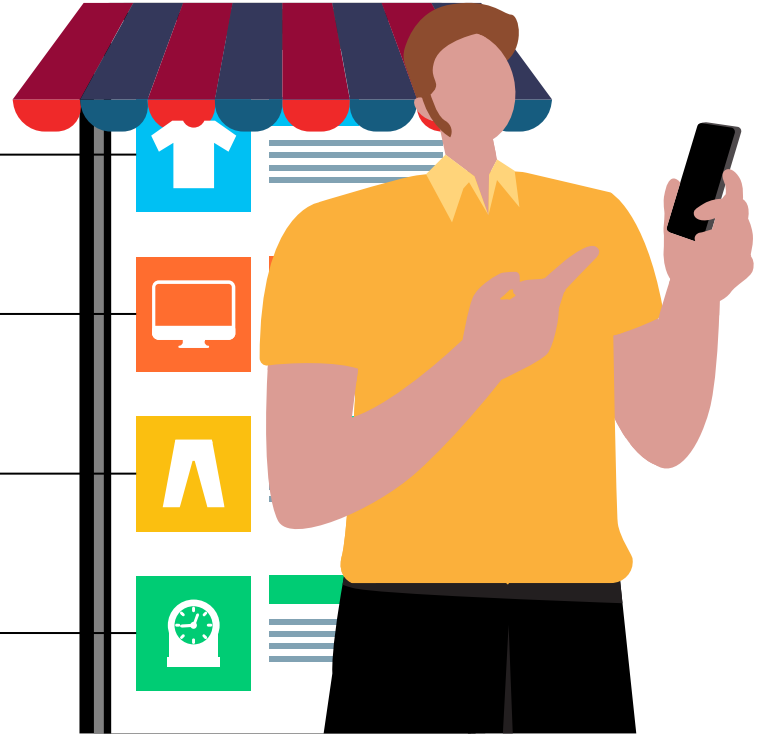
**Marketplace
Magic**

Let customers choose what they want by they can both sell and shop in "Secondhand" Categories.

**Your Way, Your
Choice**

Customers can read reviews and see ratings to make informed decisions about the purchases.

**Seller Ratings
and Reviews**



Business Rule and Constraints



User Registration

Users must create an account with valid email addresses and secure passwords.



Product Listings

Sellers can list products for sale, specifying category (First-hand, Second-hand, Antique), product details, and price.



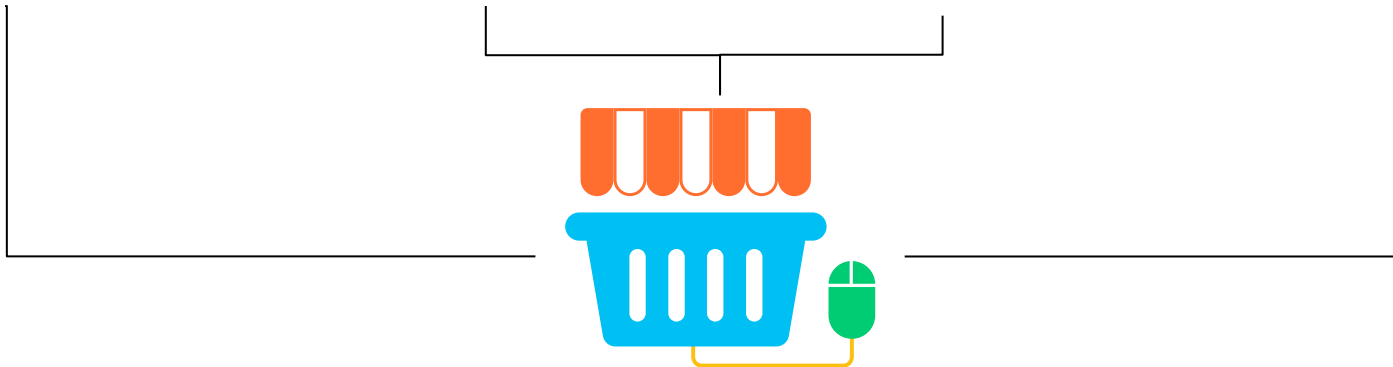
Bidding

Auction listings should include starting bid, bid increment, and auction duration.



User Reviews

The platform may take action against sellers with consistently poor ratings.



Business Rule and Constraints

Compliance

The platform must comply with all relevant laws and regulations related to online marketplaces, e-commerce, and consumer protection.

Product Update

Product updates should include changes in price, quantity, product description. Deleting items should be allowed to remove products that are no longer available.

Shipping and Delivery

Sellers are responsible for shipping the purchased items to buyers. Shipping fees, delivery times, and tracking information should be provided to buyers.

Order Cancellation

Customers are unable to request order cancellation once it has been initiated



Operations

INSERT

- New Customer
- New Seller
- New Product
- New Auction
- New Order
- New Secondhand Product
- New Review



DELETE

- Customer
 - Seller
- Product
 - Order
- Address
 - Review

UPDATE

- Customer Information
 - Seller Information
- Product Description
 - Product Review
 - Sales Total
 - Delivery Status

Queries and Report

Customer

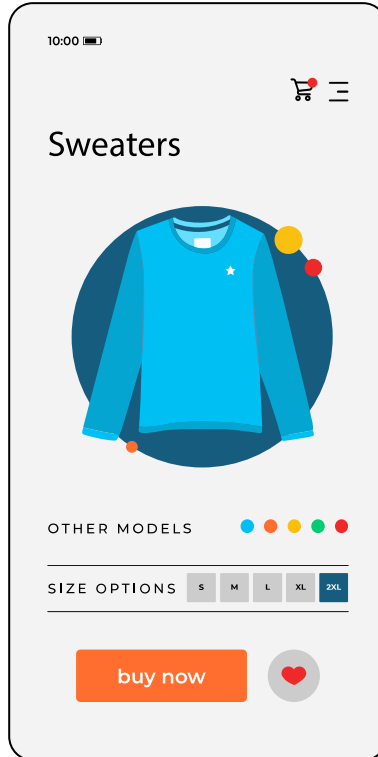
- Identify High-Value Customers
- Calculate Customer Ratings

Seller

- Top-Rated Sellers
- Inventory Management
- Seller Performance Analysis
- Seller Location Insights
- Sellers with Multiple Store Locations

Address

- Popular Cities with High Delivery Demand
- Unique States with Seller Presence
- Pin Code-Based Delivery Tracking



Product Review

- Average Review Ratings by Product
 - Most Helpful Reviews
- Customers with the Most Reviews

Product

- List Top-Rated Products
- Products with High Discounts
 - Available Stock Analysis
 - Manufacturer Popularity
- Product Sales by Category
 - High-Value Products

Sells

- Top Sellers by Revenue
- Most Sold Products by Seller
- Sellers with Low Stock Products

Queries and Report

New

- List New Products with Discounts
- Find New Products with Warranty Information
- Total Revenue Generated by Each Seller for New Products

Second Hand

- List Secondhand Products with Warranty
- Find Recently Listed Secondhand Products
- Total Number of Secondhand Products per Seller

Auction

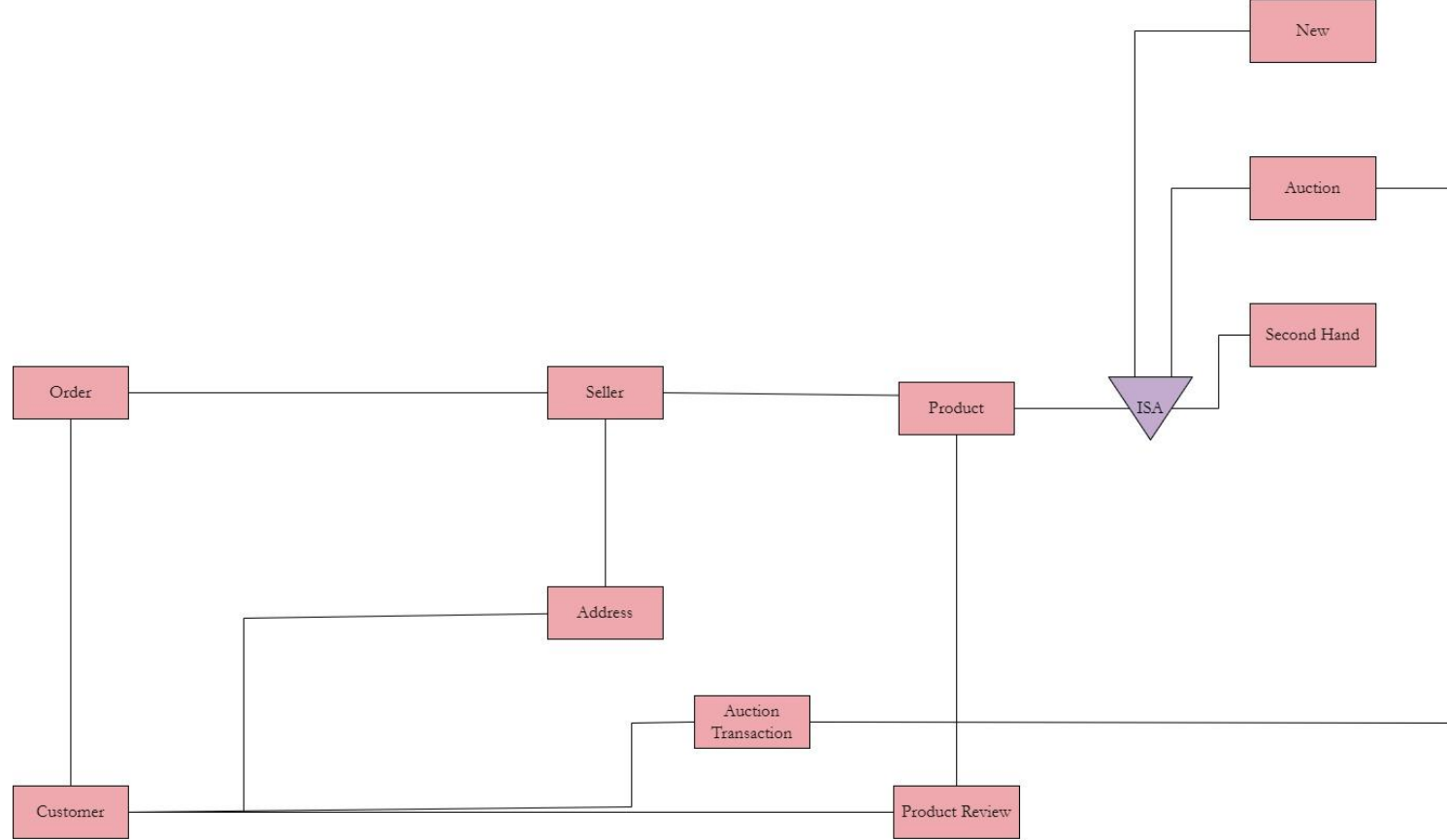
- Find the Most Expensive Auction
- List Auctions with No Bids

Auction Transaction

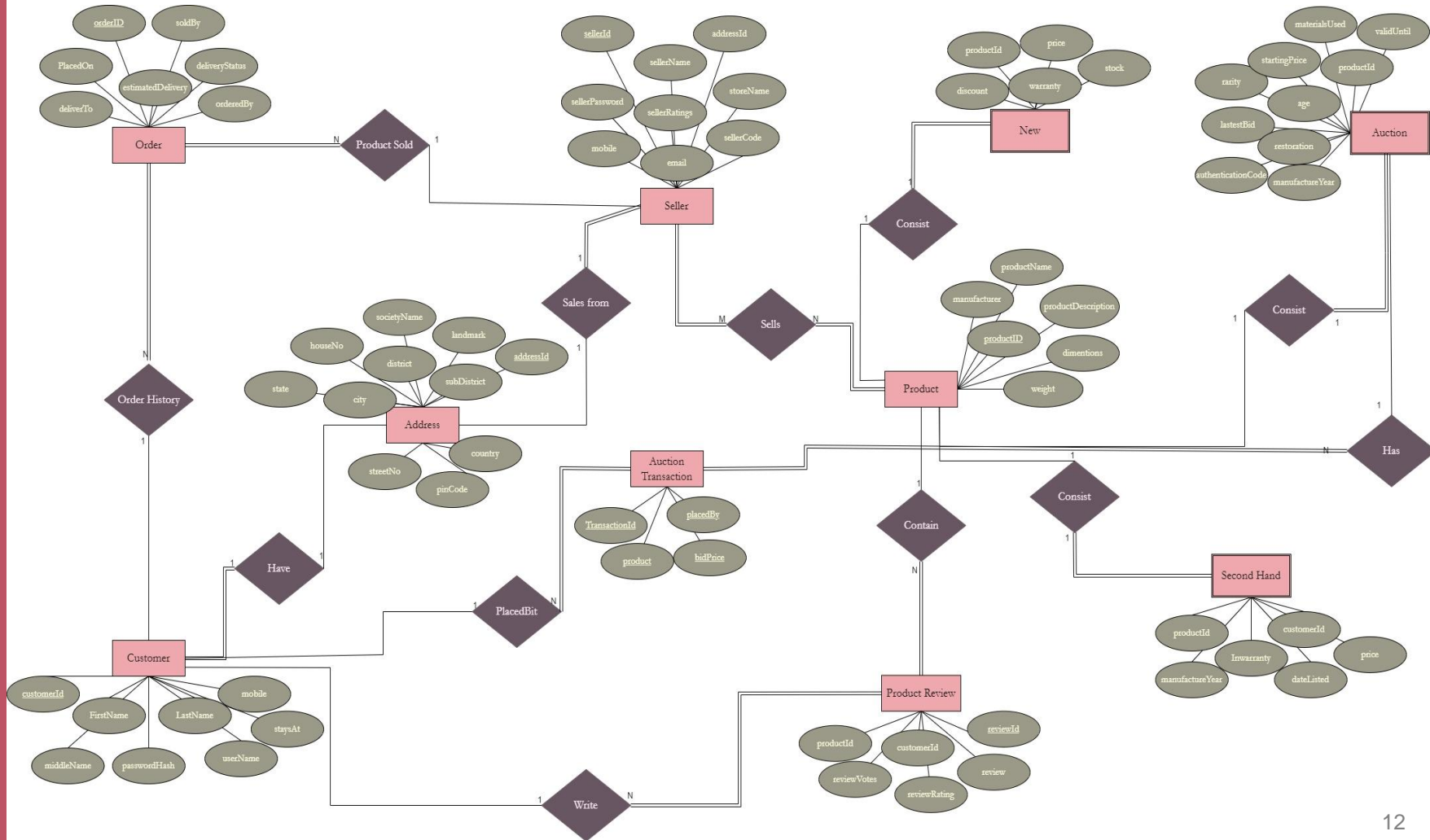
- List Products with No Bids
- Calculate Total Bid Amount by Customer
- Auction Transaction History



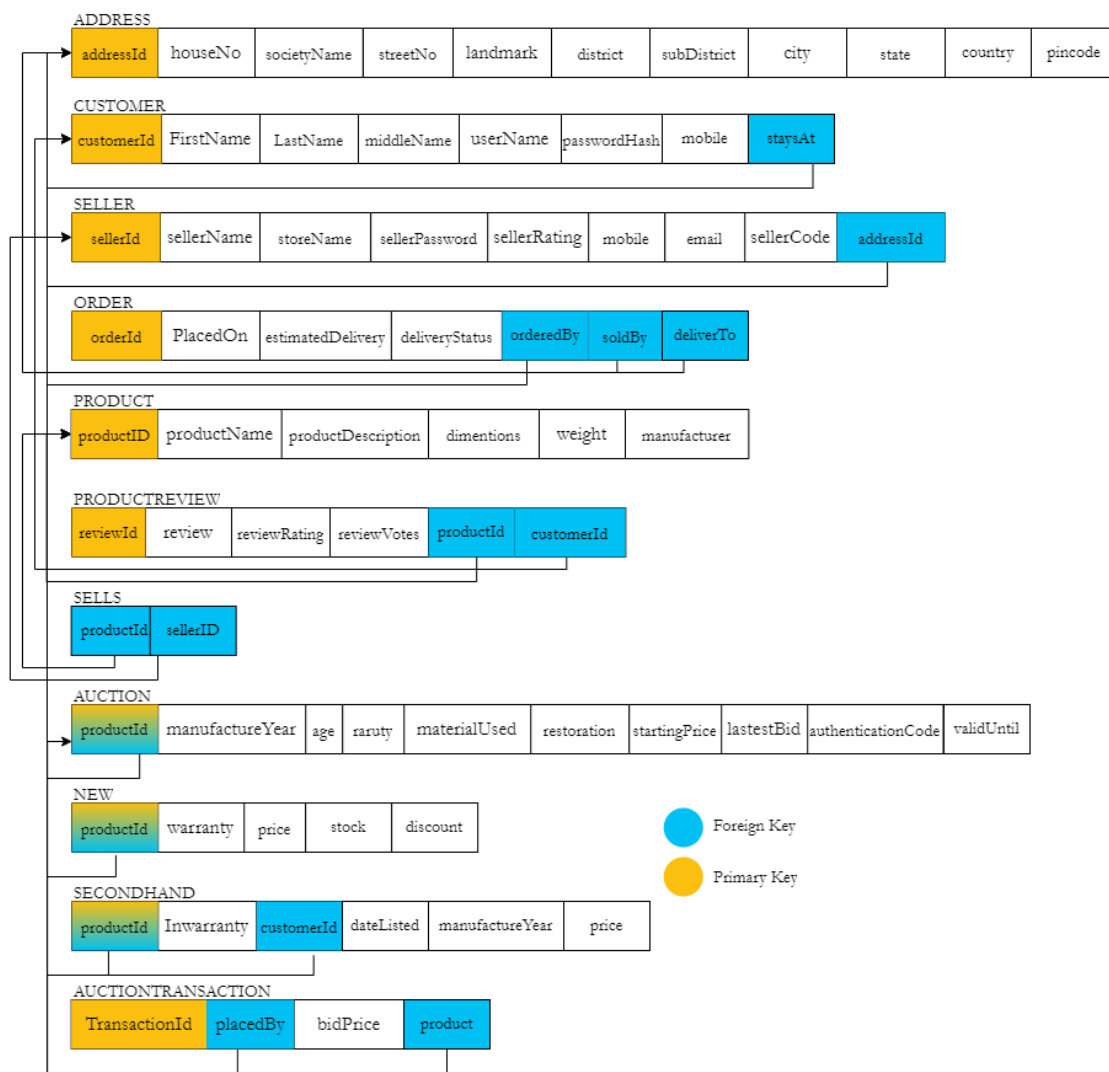
Conceptual Diagram

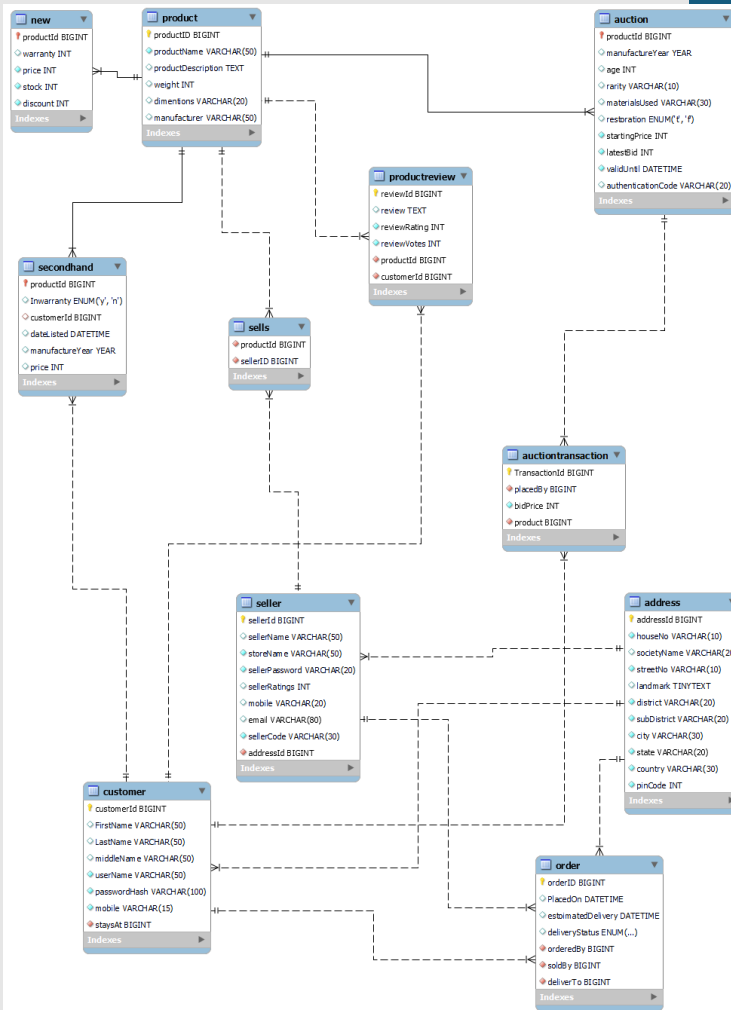


Logical Diagram



Logical Diagram





Extended Entity Relationship Diagram

Data Dictionary - Customer

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
customerId	unique customer identification	bigint	NO	PK	NULL	auto_increment
FirstName	describes the first name of the customer	varchar(50)	YES		NULL	
LastName	describes the last name of the customer	varchar(50)	YES		NULL	
middleName	describes the middel name of the customer	varchar(50)	YES		NULL	
userName	describes the user name of the customer	varchar(50)	NO		NULL	
passwordHash	store the password hash	varchar(50)	NO		NULL	
mobile	describes the mobile number of the customer	varchar(15)	NO		NULL	
staysAt	stores the address id of the customer address information	bigint	NO	FK	NULL	



Data Dictionary - Address

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
addressId	unique address identification	bigint	NO	PRI	NULL	auto_increment
houseNo	stores the house number	varchar(10)	NO		NULL	
societyName	describes the name of the society	varchar(20)	YES		NULL	
streetNo	describes the street number of the location	varchar(10)	NO		NULL	
landmark	describes a well known location near the location	tinytext	YES		NULL	
district	stores the name of the district of the location	varchar(20)	NO		NULL	
subDistrict	stores the name of the sub district of the location	varchar(20)	NO		NULL	
city	describes the name of the city of the location	varchar(20)	NO		NULL	
state	describes the name of the state the house is located in	varchar(20)	NO		NULL	
country	name of the country of the location	varchar(20)	NO		NULL	
pinCode	pincode or zipcode of the location of the location area	int	NO		NULL	



Data Dictionary - Order

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
orderId	unique identification of the order placed	bigint	NO	PRI	NULL	auto_increment
PlacedOn	used now() to specify the date the order was placed on	datetime	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED
estimatedDelivery	used to describe the estimated date the order will be delivered on	datetime	YES		NULL	
deliveryStatus	uses ENUM to describe the current state of the order from 7 possible states	enum('Failed','packed','shipped','out for delivery','returned','delivered','to be packed')	YES		to be packed	
orderedBy	describes the Id of the customer who placed the order	bigint	NO	FK	NULL	
soldBy	describes the Id of the seller who is going to fulfill that order	bigint	NO	FK	NULL	
deliverTo	describes the id of the address to which the order is to be delivered	bigint	NO	FK	NULL	



Data Dictionary - Product

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
productID	unique identification of the product	bigint	NO	PRI	NULL	auto_increment
productName	describes the name of the product	varchar(50)	NO		NULL	
productDescription	describes the product using text	text	YES		NULL	
weight	store the weight of the product in kgs	int	YES		NULL	
dimentionations	storet the dimention of the product in mm in the format length*breath*height	varchar(20)	YES		NULL	
manufacturer	store the name of the product manufacturer	varchar(50)	YES		NULL	



Data Dictionary - Auction

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
productId	unique identification of the product	bigint	NO	PRI,FK	NULL	auto_increment
manufactureYear	stores the manufacturiing year of product	year	YES		NULL	
age	store the age of the product in years	int	YES		NULL	
rarity	stores how many replicas of the same product exists	varchar(10)	YES		NULL	
materialsUsed	describes the name of the materials used in manufacturing	varchar(30)	YES		NULL	
restoration	describes if the product has gone thorough the restoration process t for True	enum('t','f')	YES		f	
startingPrice	stores the base price set by the owner	int	NO		NULL	
latestBid	store the latst bid made on the product	int	NO		NULL	
authenticationCode	stores the authentication code received by the product if any	varchar(20)	YES		NULL	
validUntil	Show the Auction Expiration time	datetime	NO		NULL	



Data Dictionary - Seller

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
sellerId	unique seller identification	bigint	NO	PRI	NULL	auto_increment
sellerName	stores the name of the owner of the business	varchar(50)	YES		NULL	
storeName	stores the name of the online store	varchar(50)	NO		NULL	
sellerPassword	stores the password used to access the online shop	varchar(20)	NO		NULL	
sellerRatings	stores the Average rating received by the seller	int	YES		0	
mobile	store the mobile number of the seller	varchar(20)	YES		NULL	
email	store the stores email id	varchar(80)	YES		NULL	
sellerCode	stores the unique tax number of the online store	varchar(30)	NO		NULL	
addressId	stores the address id of the seller address information	bigint	NO	MUL	NULL	



Data Dictionary - Review

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
reviewId	unique review identification	bigint	NO	PRI	NULL	auto_increment
review	stores the review text	text	YES		NULL	
reviewRating	stores the rating of the product out of 5	int	NO		NULL	
reviewVotes	stores the rating or the votes received by the rating	int	NO		0	
productId	stores the id of the product the review refers to	bigint	NO	FK	NULL	
customerId	store the id of the customer who wrote the review	bigint	NO	FK	NULL	



Data Dictionary - New

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
productId	unique identification of the product	bigint	NO	PRI	NULL	
warranty	stores the warranty information of the product	int	YES		NULL	
price	stores the price of the product	int	NO		NULL	
stock	stores the stock of items in number	int	NO		0	
discount	describes the discount offered in the item if any	int	NO		0	



Data Dictionary - Second Hand

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
productId	unique product identification	bigint	NO	PRI,FK	NULL	
Inwarranty	describes if the product is in warranty	enum('y','n')	YES		n	
customerId	store the id of the customer who listed the product	bigint	YES	FK	NULL	
dateListed	store the date on which the product was listed using now function	datetime	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED
manufactureYear	describes the year of manufacturing of the product	year	YES		NULL	
price	price of secondhand product	int	NO		NULL	



Data Dictionary - Auction Transaction

Attributes	Description	Data Type	Null	PK/FK	Default	Extra
TransactionId	Transaction ID to keep tracks of auctions.	bigint	NO	PRI		auto_increment
placedBy	Foreign key to reference to the customerID in customer Table	bigint	NO	FK		
bidPrice	Show final bid price	int	NO			
product	Foreign key to reference to the productID in product Table	bigint	NO	FK		



Operations & Transactions - Customer

Identify High-Value Customers

Query to identify customers who have spent more than a specified amount.



```
-- Identify High-Value Customers:
SELECT c.FirstName, c.LastName, SUM(price) AS TotalSpent
FROM customer c
JOIN `order` o ON c.customerId = o.orderedBy
JOIN `new` n ON o.orderID = n.productId
GROUP BY c.customerId
HAVING TotalSpent > 1000;
```

	FirstName	LastName	TotalSpent
▶	Vinita	Succamore	35964
	Burgess	Eakin	32318
	Bernie	Dollen	27662
	Isidro	Dickson	17668
	Alfi	Wilds	28264
	Bill	Look	26849
	Anjela	Denial	32380

Operations & Transactions - Customer

Calculate Customer Ratings

Query to calculate the average ratings given by customers for products they've reviewed.



```
-- Calculate Customer Ratings:  
SELECT c.FirstName, c.LastName, AVG(pr.reviewRating) AS AvgRating  
FROM customer c  
JOIN productReview pr ON c.customerId = pr.customerId  
GROUP BY c.customerId;
```

	FirstName	LastName	AvgRating
▶	Antin	Blaiklock	10.0000
	Laughton	Ainge	10.0000
	Jere	Woodberry	9.0000
	Tristan	Dumphrey	8.5000
	Jenda	Leheude	7.0000
	Kit	Vallender	7.0000
	Obadiah	Heindrick	7.0000
	Weston	Crowden	7.0000
	Beatrisa	Schober	6.6667
	Deeann	McShea	6.5000
	Heidi	Buckenhill	6.5000
	Verge	Jiqqen	6.0000

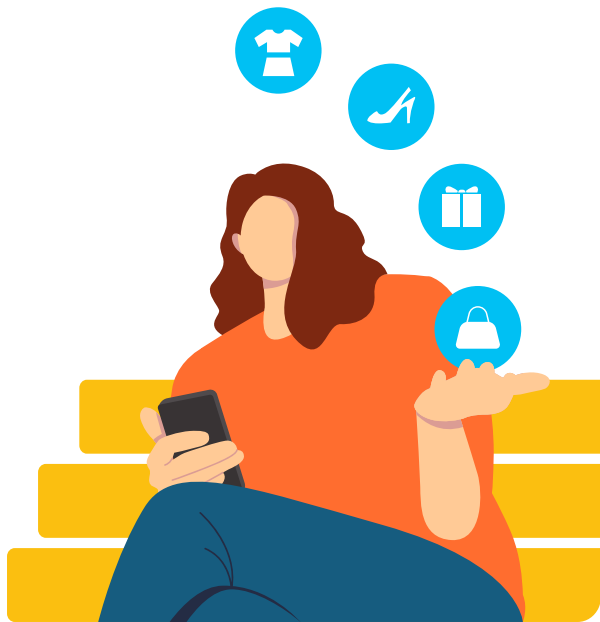
Operations & Transactions - Seller

Top-Rated Sellers

Query to find the top 10 sellers with the highest seller ratings.

```
-- Query to find the top 10 sellers with the highest seller ratings.  
SELECT sellerName, sellerRatings  
FROM seller  
ORDER BY sellerRatings DESC  
LIMIT 10;
```

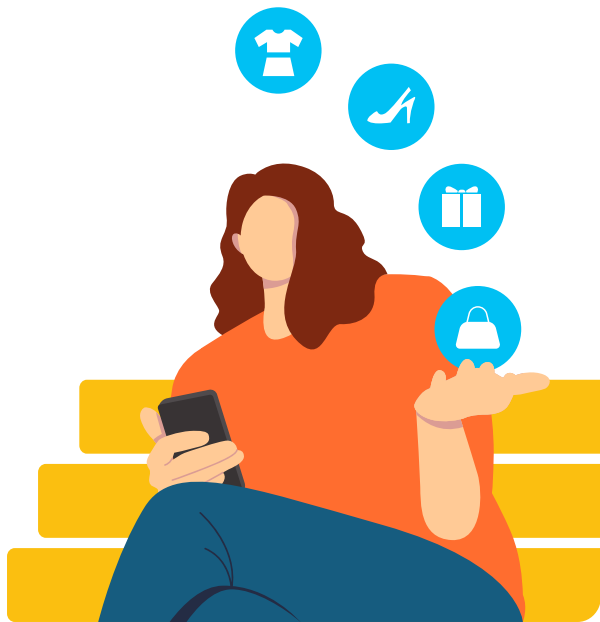
	sellerName	sellerRatings
▶	Kristan	10
	Cordey	8
	Nicolai	8
	Phillis	8
	Herschel	7
	Elizabet	6
	Inness	6
	Kimmi	6
	Nap	6
	Devlin	6



Operations & Transactions - Seller

Inventory Management

Query to identify sellers with low stock levels for restocking.



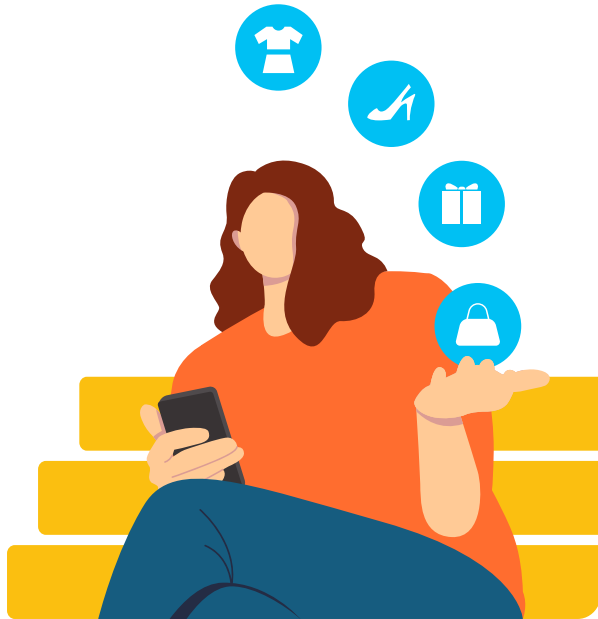
```
SELECT s.sellerName, COUNT(se.productId) AS LowStockCount
FROM seller s
LEFT JOIN sells se ON s.sellerId = se.sellerId
JOIN `new` n ON se.productId = n.productId
WHERE n.stock < 100
GROUP BY s.sellerName
HAVING LowStockCount > 0;
```

	sellerName	LowStockCount
	Gabriello	2
	Herschel	1
	Nap	1
	Ferdinande	1
	Devlin	1
	Lyndell	1
	Elizabet	1
▶	Phillis	1

Operations & Transactions - Seller

Seller Performance Analysis

Query to analyze seller performance by calculating the total revenue generated.



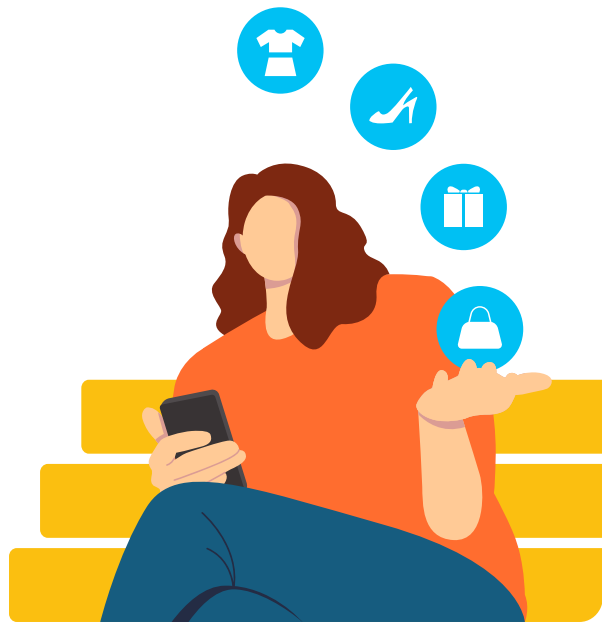
```
-- Seller Performance Analysis
SELECT s.sellerName, SUM(n.price) AS TotalRevenue
FROM seller s
JOIN sells se ON s.sellerId = se.sellerId
JOIN `new` n ON se.productId = n.productId
GROUP BY s.sellerName
ORDER BY TotalRevenue DESC;
```

	sellerName	TotalRevenue
▶	Gabriello	60582
	Herschel	35964
	Nap	32318
	Ferdinande	32318
	Elizabet	28264
	Phillis	26849
	Devlin	17668
	Lyndell	17668

Operations & Transactions - Seller

Seller Location Insights

Query to analyze the distribution of sellers by state for targeted partnerships.



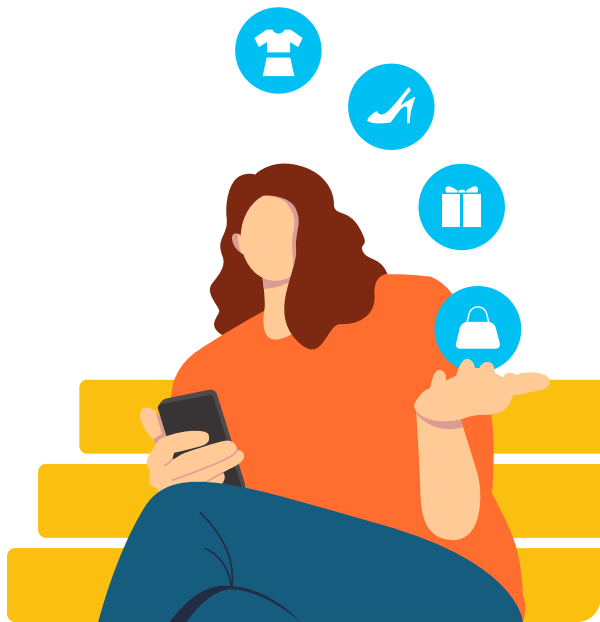
```
SELECT a.state, COUNT(s.sellerId) AS SellerCount
FROM address a
JOIN seller s ON a.addressId = s.addressId
GROUP BY a.state
ORDER BY SellerCount DESC;
```

state	SellerCount
Bronx	2
Alquizar	1
Föglö	1
Mallawī	1
Bascaron	1
Saidpur	1
Sindang	1
Hradec nad Moravici	1
Rio Branco	1
Glogjan	1
Ubiaja	1
Lewopao	1

Operations & Transactions - Seller

Sellers with Multiple Store Locations

Query to find sellers with multiple store locations for potential collaborations.



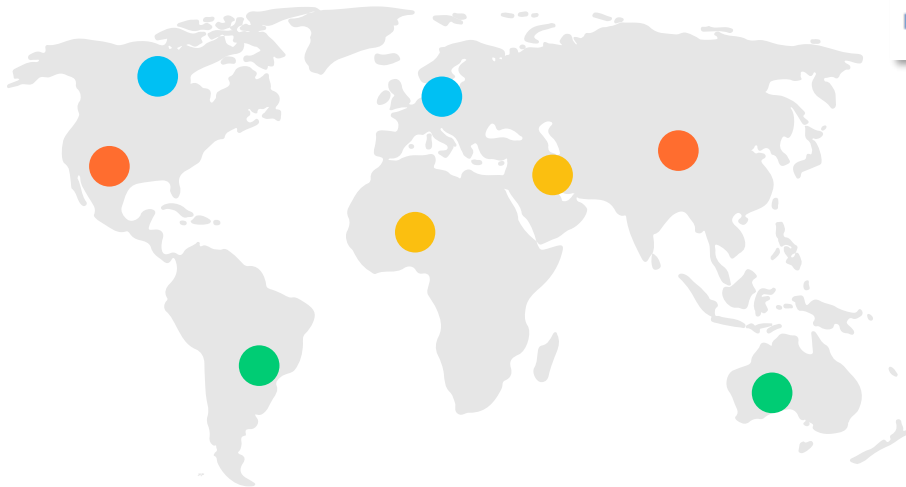
```
-- Sellers with Multiple Store Locations:  
SELECT s.sellerName, COUNT(a.addressId) AS StoreCount  
FROM seller s  
JOIN address a ON s.addressId = a.addressId  
GROUP BY s.sellerName  
HAVING StoreCount > 1;
```

	sellerName	StoreCount
►	Inness	2

Operations & Transactions - Address

Popular Cities with High Delivery Demand

Query to find the top 5 cities with the highest number of delivery orders.



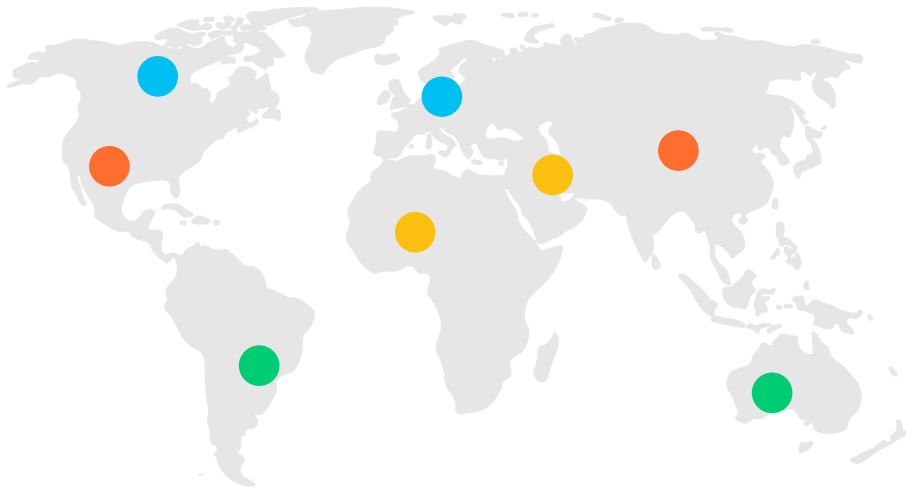
```
-- Popular Cities with High Delivery Demand:  
SELECT city, COUNT(orderID) AS DeliveryCount  
FROM address  
JOIN `order` ON address.addressId = `order`.deliverTo  
GROUP BY city  
ORDER BY DeliveryCount DESC  
LIMIT 5;
```

	city	DeliveryCount
►	Goba	2
	Hashimoto	2
	Kipen'	2
	Montpellier	2
	Zaprudnya	1

Operations & Transactions - Address

Unique States with Seller Presence

Query to list the unique states where sellers are located.



```
-- Unique States with Seller Presence
```

```
SELECT DISTINCT state, sellerName
```

```
FROM address
```

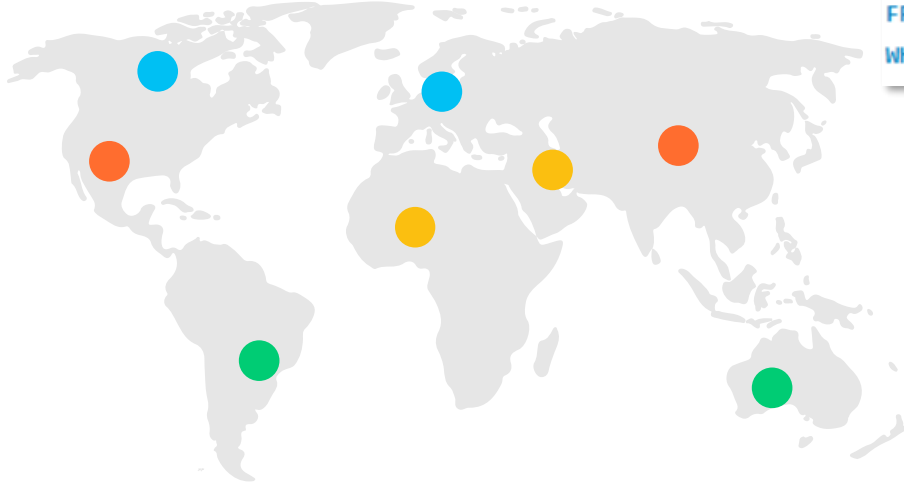
```
JOIN seller ON address.addressId = seller.addressId;
```

	state	sellerName
▶	Alquízar	Elizabet
	Föglö	Helyn
	Mallawī	Bridget
	Bascaron	Kristan
	Saidpur	Joshua
	Sindang	Arne
	Hradec nad Moravici	Inness
	Rio Branco	Kimmi
	Bronx	Brigitta
	Glogjan	Nap
	Bronx	Devlin
	Ubiaja	Ferdinande

Operations & Transactions - Address

Pin Code-Based Delivery Tracking

Query to track the status of orders delivered to a specific pin code.



```
-- Pin Code-Based Delivery Tracking
SELECT orderID, deliveryStatus
FROM `order`
WHERE deliverTo IN (SELECT addressId FROM address WHERE pinCode = 7820)
```

	orderID	deliveryStatus
▶	19	to be packed

Operations & Transactions - Product

List Top-Rated Products

Query to find the top-rated products based on average review ratings.



-- List Top-Rated Products:

```
SELECT productName, AVG(reviewRating) AS AvgRating
FROM product
JOIN productReview ON product.productID = productReview.productID
GROUP BY productName
ORDER BY AvgRating DESC
LIMIT 10;
```

	productName	AvgRating
▶	2500	10.0000
	Focus	9.0000
	430 Scuderia	8.3333
	Justy	7.3333
	NSX	6.6667
	Compass	6.6667
	M-Class	6.5000
	Miata MX-5	6.0000
	Viper	6.0000
	Wrangler	5.5000

Operations & Transactions - Product

Products with High Discounts

Query to list products with the highest discounts.



```
SELECT productName, MAX(discount) AS MaxDiscount
FROM product
JOIN `new` ON product.productID = `new`.productID
GROUP BY productName
ORDER BY MaxDiscount DESC
LIMIT 10;
```

	productName	MaxDiscount
▶	GTO	8513
	850	8067
	Century	7838
	Wrangler	7721
	Miata MX-5	7093
	Viper	4288
	Focus	2331

Operations & Transactions - Product

Available Stock Analysis

Query to analyze products with low stock levels.



```
-- Available Stock Analysis:  
SELECT productName, SUM(stock) AS TotalStock  
FROM product  
JOIN `new` ON product.productID = `new`.productID  
GROUP BY productName  
HAVING TotalStock < 100
```

	productName	TotalStock
▶	Focus	10
	Miata MX-5	15
	850	12
	Viper	13
	GTO	19
	Century	18
	Wrangler	17

Operations & Transactions - Product

Manufacturer Popularity

Query to find the most popular manufacturer based on the number of products.



```
-- Manufacturer Popularity
SELECT manufacturer, COUNT(productID) AS ProductCount
FROM product
GROUP BY manufacturer
ORDER BY ProductCount DESC
LIMIT 1;
```

	manufacturer	ProductCount
▶	Volvo	2

Operations & Transactions - Product

Product Sales by Category

Query to analyze product sales by category (product name).



```
-- Product Sales by Category
SELECT productName, COUNT(soldBy) AS SalesCount
FROM product
JOIN `order` ON product.productID = `order`.soldBy
GROUP BY productName
ORDER BY SalesCount DESC
LIMIT 10;
```

productName	SalesCount
Quantum	3
MX	3
Focus	1
Miata MX-5	1
430 Scuderia	1
911	1
Viper	1
GTO	1
Century	1
Wrangler	1

Operations & Transactions - Product

High-Value Products

Query to identify high-value products with a price above a certain threshold.



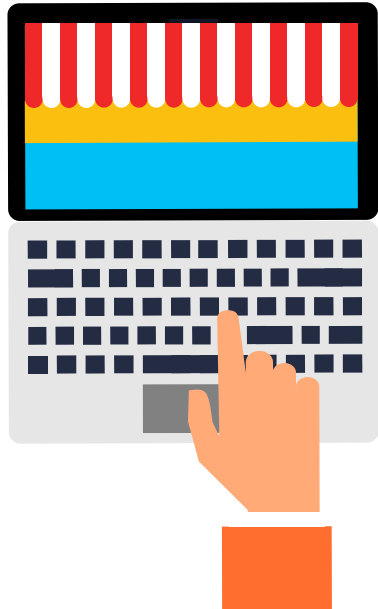
```
-- High-Value Products
SELECT productName, price
FROM product
JOIN `new` ON product.productID = `new`.productID
WHERE price > 1000
ORDER BY price DESC
LIMIT 10;
```

productName	price
Focus	35964
Wrangler	32380
Miata MX-5	32318
GTO	28264
850	27662
Century	26849
Viper	17668

Operations & Transactions - Product Review

Average Review Ratings by Product

Query to calculate the average review ratings for each product.



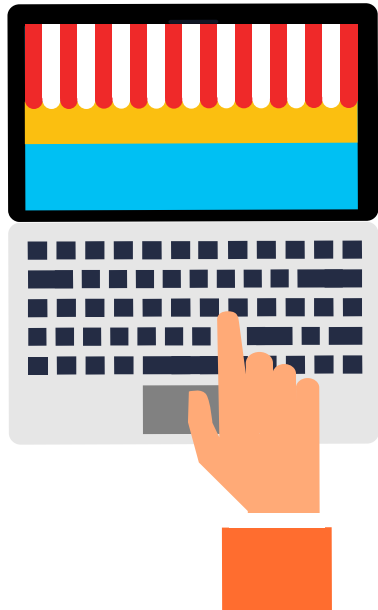
```
-- Average Review Ratings by Product
SELECT productId, AVG(reviewRating) AS AvgRating
FROM productReview
GROUP BY productId
ORDER BY AvgRating DESC
LIMIT 10;
```

	productId	AvgRating
▶	17	10.0000
	1	9.0000
	3	8.3333
	19	7.3333
	20	6.6667
	12	6.6667
	18	6.5000
	2	6.0000
	7	6.0000
	10	5.5000

Operations & Transactions - Product Review

Most Helpful Reviews

Query to find the most helpful product reviews based on review votes.



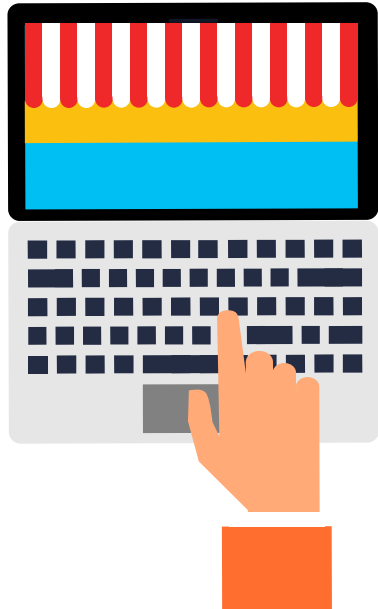
```
-- Most Helpful Reviews
SELECT reviewId, review, reviewRating, reviewVotes
FROM productReview
ORDER BY reviewVotes DESC
LIMIT 10;
```

	reviewId	review	reviewRating	reviewVotes
▶	7	Nullam sit amet turpis elementum ligula vehicula ...	1	1
	2	Vestibulum ac est lacinia nisi venenatis tristique....	5	1
	23	Fusce posuere felis sed lacus. Morbi sem mauris...	7	1
	4	Aliquam quis turpis eget elit sodales scelerisque....	9	1
	5	Proin interdum mauris non ligula pellentesque ult...	3	1
	6	Morbi porttitor lorem id ligula. Suspendisse orna...	6	1
	44	In sagittis dui vel nisl. Duis ac nibh. Fusce lacus ...	10	1
	8	Maecenas ut massa quis augue luctus tincidunt....	7	1
	20	Nullam sit amet turpis elementum ligula vehicula ...	5	1
	21	In hac habitasse platea dictumst. Etiam faucibu...	6	1

Operations & Transactions - Product Review

Customers with the Most Reviews

Query to identify customers who have submitted the most product reviews.



```
SELECT customerId, COUNT(reviewId) AS ReviewCount
FROM productReview
GROUP BY customerId
ORDER BY ReviewCount DESC
LIMIT 10;
```

	customerId	ReviewCount
▶	48	4
	13	4
	24	4
	31	3
	11	3
	6	2
	25	2
	40	2
	33	2
	22	2

Operations & Transactions - Sells

Top Sellers by Revenue

Query to find the top-selling sellers based on the total revenue generated from their sales.



```
-- Top Sellers by Revenue
SELECT s.sellerName, SUM(n.price) AS TotalRevenue
FROM seller s
JOIN sells se ON s.sellerId = se.sellerId
JOIN `new` n ON se.productId = n.productId
GROUP BY s.sellerName
ORDER BY TotalRevenue DESC
LIMIT 10;
```

	sellerName	TotalRevenue
▶	Gabriello	60582
	Herschel	35964
	Nap	32318
	Ferdinande	32318
	Elizabet	28264
	Phillis	26849
	Devlin	17668
	Lyndell	17668

Operations & Transactions - Sells

Most Sold Products by Seller

Query to identify the products that each seller has sold the most.



```
-- Most Sold Products by Seller
```

```
SELECT s.sellerName, p.productName, COUNT(se.productId) AS TotalSold
FROM seller s
JOIN sells se ON s.sellerId = se.sellerId
JOIN product p ON se.productId = p.productId
GROUP BY s.sellerName, p.productName
ORDER BY TotalSold DESC
LIMIT 10;
```

	sellerName	productName	TotalSold
▶	Herschel	Focus	1
	Nap	Miata MX-5	1
	Gabriello	Miata MX-5	1
	Ferdinande	Miata MX-5	1
	Helyn	430 Scuderia	1
	Herschel	430 Scuderia	1
	Briana	430 Scuderia	1
	Elizabet	911	1
	Devlin	Quantum	1
	Joshua	Quantum	1

Operations & Transactions - Sells

Sellers with Low Stock Products

Query to list sellers who have products in low stock (stock count less than a specified threshold).



-- Most Sold Products by Seller

```
SELECT s.sellerName, p.productName, COUNT(se.productId) AS TotalSold
FROM seller s
JOIN sells se ON s.sellerId = se.sellerId
JOIN product p ON se.productId = p.productId
GROUP BY s.sellerName, p.productName
ORDER BY TotalSold DESC
LIMIT 10;
```

	sellerName	productName	TotalSold
▶	Herschel	Focus	1
	Nap	Miata MX-5	1
	Gabriello	Miata MX-5	1
	Ferdinande	Miata MX-5	1
	Helyn	430 Scuderia	1
	Herschel	430 Scuderia	1
	Briana	430 Scuderia	1
	Elizabet	911	1
	Devlin	Quantum	1
	Joshua	Quantum	1

Operations & Transactions - Second Hand

List Secondhand Products with no Warranty

Query to retrieve secondhand products that don't have warranty coverage.



```
-- List Secondhand Products with no Warranty:
```

```
SELECT p.productName, sh.Inwarranty
```

```
FROM online_site.product p
```

```
JOIN online_site.secondHand sh ON p.productID = sh.productID
```

```
WHERE sh.Inwarranty = 'n';
```

	productName	Inwarranty
▶	XJ Series	n
	Compass	n
	C-Class	n
	MKX	n
	Tracer	n
	C70	n
	2500	n
	M-Class	n
	Justy	n
	NSX	n

Operations & Transactions - Second Hand

Find Recently Listed Secondhand Products

Query to list secondhand products that have been recently listed for sale.



```
SELECT p.productName, sh.dateListed
FROM online_site.product p
JOIN online_site.secondHand sh ON p.productID = sh.productID
WHERE sh.dateListed >= DATE_SUB(NOW(), INTERVAL 100 DAY); --
```

	productName	dateListed
▶	XJ Series	2023-07-22 17:57:12
	C70	2023-08-20 22:32:45

Operations & Transactions - Second Hand

Total Number of Secondhand Products per Seller

Query to calculate the total number of secondhand products listed by each seller.



```
SELECT s.sellerName, COUNT(sh.productId) AS TotalListed
FROM online_site.seller s
LEFT JOIN online_site.secondHand sh ON s.sellerId = sh.customerId
GROUP BY s.sellerName;
```

	sellerName	TotalListed
▶	Lyndell	2
	Devlin	1
	Briana	1
	Elizabet	0
	Helyn	0
	Bridget	0
	Kristan	0
	Joshua	0
	Arne	0
	Inness	0

Operations & Transactions - New

List New Products with Discounts

Query to retrieve new products that have discounts applied.



```
-- List New Products with Discounts
SELECT p.productName, n.discount
FROM online_site.product p
JOIN online_site.new n ON p.productID = n.productId
WHERE n.discount > 0;
```

	productName	discount
▶	Focus	2331
	Miata MX-5	7093
	850	8067
	Viper	4288
	GTO	8513
	Century	7838
	Wrangler	7721

Operations & Transactions - New

Find New Products with Warranty Information

Query to list new products that come with warranty coverage.

```
SELECT p.productName, n.warranty
FROM online_site.product p
JOIN online_site.new n ON p.productID = n.productID
WHERE n.warranty IS NOT NULL;
```

	productName	warranty
▶	Focus	1
	Miata MX-5	1
	850	1
	Viper	0
	GTO	0
	Century	1
	Wrangler	0



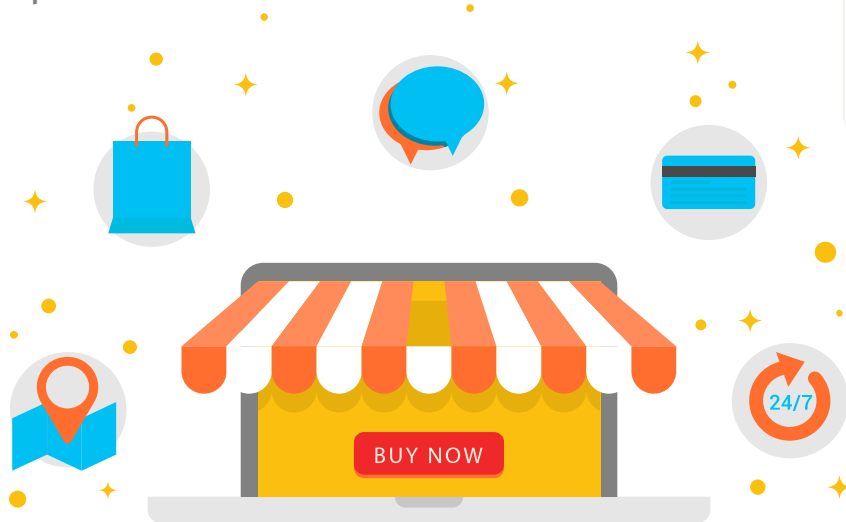
Operations & Transactions - New

Total Revenue Generated by Each Seller for New Products

Query to calculate the total revenue generated by each seller from selling new products.

```
SELECT s.sellerName, SUM(n.price) AS TotalRevenue
FROM online_site.seller s
JOIN online_site.sells se ON s.sellerId = se.sellerId
JOIN online_site.new n ON se.productId = n.productId
GROUP BY s.sellerName;
```

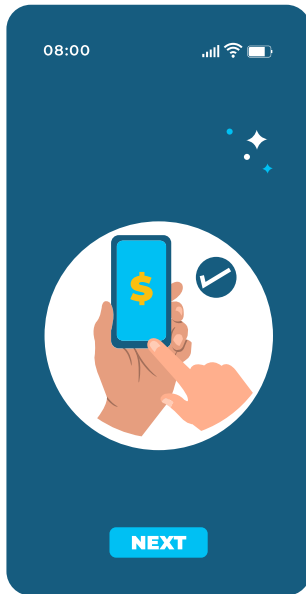
	sellerName	TotalRevenue
	Gabriello	60582
▶	Herschel	35964
	Nap	32318
	Ferdinande	32318
	Elizabet	28264
	Phillis	26849
	Devlin	17668
	Lyndell	17668



Operations & Transactions - Auction

Find the Most Expensive Auction

Query to find the auction with the highest current bid.



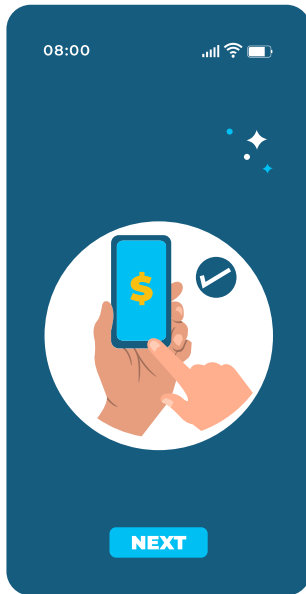
```
SELECT p.productName, a.latestBid
FROM online_site.product p
JOIN online_site.auction a ON p.productID = a.productID
ORDER BY a.latestBid DESC
LIMIT 1;
```

	productName	latestBid
▶	C-Class	119922

Operations & Transactions - Auction

List Auctions with No Bids

Query to identify auctions that have received no bids.

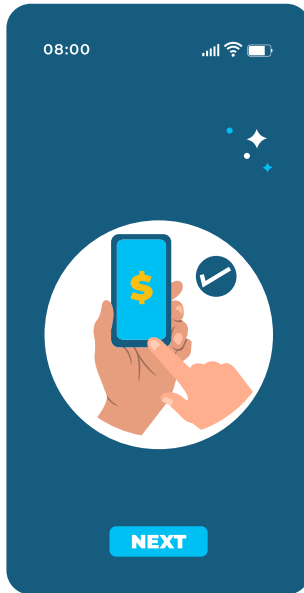


```
SELECT p.productID, p.productName
FROM online_site.product p
LEFT JOIN online_site.auction a ON p.productID = a.productID
WHERE a.latestBid IS NULL;
```

	productID	productName
▶	1	Focus
	3	430 Scuderia
	4	850
	5	911
	6	Quantum
	9	Century
	10	Wrangler
	11	XJ Series
	18	M-Class
	19	Justy

Operations & Transactions - Auction Transaction

List Product with No Bids



```
-- List Products with No Bids  
SELECT p.productName  
FROM online_site.product p  
LEFT JOIN online_site.auctionTransaction t ON p.productID = t.product  
WHERE t.product IS NULL;
```

	productName
▶	430 Scuderia
	850
	911
	Quantum
	GTO
	Century
	XJ Series
	C-Class
	MKX
	C70
	M-Class

Operations & Transactions - Auction Transaction

Calculate Total Bid Amount by Customer

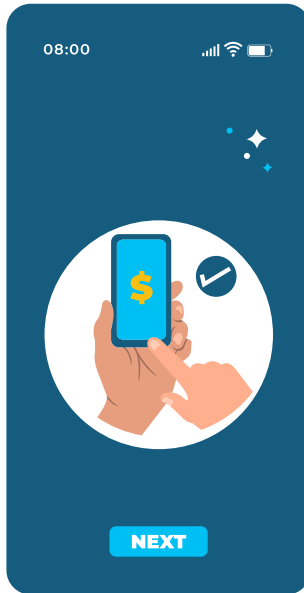


```
-- Calculate Total Bid Amount by Customer
SELECT placedBy AS CustomerId, SUM(bidPrice) AS TotalBidAmount
FROM online_site.auctionTransaction
WHERE placedBy = 16 -- Replace with the actual customer ID
GROUP BY placedBy;
```

	CustomerId	TotalBidAmount
▶	16	7454

Operations & Transactions - Auction Transaction

Auction Transaction History



-- Auction Transaction History

```
SELECT t.TransactionId, c.FirstName, c.LastName, p.productName, t.bidPrice
FROM online_site.auctionTransaction t
JOIN online_site.customer c ON t.placedBy = c.customerId
JOIN online_site.product p ON t.product = p.productId
ORDER BY t.TransactionId;
```

	TransactionId	FirstName	LastName	productName	bidPrice
▶	1	Finn	Melrose	2500	7454
	2	Dolly	Sailor	Justy	7314
	3	Sutherland	Titchen	Wrangler	1150
	4	Shay	Stoade	Miata MX-5	7048
	5	Lindie	Stawell	Viper	4773
	6	Lemmy	Cockin	Tracer	8476
	7	Antin	Blaklock	Focus	3444
	8	Shani	Lottrington	Focus	6456
	9	Bill	Look	Tracer	4980
	10	Lemmy	Cockin	Compass	9547

THANK YOU