# **1. Top Selling Products**

Identify the top 5 best-selling products based on the total quantity sold.

SELECT P.product\_name, SUM(OI.quantity) AS total\_sold
FROM order\_items OI

JOIN products P

ON OI.product\_id = P.product\_id

GROUP BY 1

ORDER BY 2 DESC

LIMIT 5

product_name	total_sold
Electra Cruiser 1 (24-Inch) - 2016	296
Electra Townie Original 7D EQ - 2016	290
Electra Townie Original 21D - 2016	289
Electra Girl's Hawaii 1 (16-inch) - 2015/2016	269
Surly Ice Cream Truck Frameset - 2016	167

# 2.Sales by Year

# Calculate total sales for each year.

SELECT YEAR(O.order\_date) AS year, ROUND(SUM(OI.quantity \* OI.list\_price \* (1-OI.discount)),2) AS total\_sales

FROM orders O

JOIN order\_items OI

ON O.order\_id = OI.order\_id

GROUP BY YEAR(O.order\_date)

ORDER BY year DESC

year	total_sales
2018	1814529.79
2017	3447208.24
2016	2427378.53

## 3.Staff Performance Based on Product Categories Sold:

# Assessing staff performance by evaluating the sales of different product categories

```
select S.staff_id, S.first_name, S.last_name, C.category_name, round(sum(l.quantity*l.list_price*(1-l.discount)),2) as Sales from orders O

join staffs S

on O.staff_id = S.staff_id

join order_items I

on O.order_id = l.order_id

join products P

on l.product_id = P.product_id

join categories C

on P.category_id = C.category_id

group by 1,2,3,4

order by 5 desc

limit 10
```

staff_id	first_name	last_name	category_name	Sales
6	Marcelene	Boyer	Mountain Bikes	930168.36
7	Venita	Daniel	Mountain Bikes	906223.86
6	Marcelene	Boyer	Road Bikes	576487.09
7	Venita	Daniel	Road Bikes	563990.13
7	Venita	Daniel	Cruisers Bicycles	343295.12
6	Marcelene	Boyer	Cruisers Bicycles	338500.65
7	Venita	Daniel	Electric Bikes	310725.67
6	Marcelene	Boyer	Electric Bikes	292104.11
3	Genna	Serrano	Mountain Bikes	284387.97
2	Mireya	Copeland	Mountain Bikes	277859.67

# 4. Average Discount Given by Product Category:

Calculating the average discount given for different product categories.

```
select C.category_name, round(avg(I.discount*100),3) as Average_discount_by_Product_Category
from products P
join categories C
on P.category_id = C.category_id
join order_items I
on P.product_id = I.product_id
group by 1
order by 2 desc;
```

	category_name	Average_discount_by_Product_Category
Ĺ	Cydocross Bicydes	11.133
	Children Bicycles	10.79
	Road Bikes	10.556
	Electric Bikes	10.514
	Mountain Bikes	10.504
	Cruisers Bicycles	10.436
	Comfort Bicycles	10.214

# **5.Best-Selling Brands**

Identify which brands have the highest sales.

FROM order\_items OI

JOIN products P

ON oi.product\_id = P.product\_id

JOIN brands B

SELECT B.brand\_name, ROUND(SUM(OI.quantity \* OI.list\_price \* (1-OI.discount)),2) AS total\_sales

GROUP BY 1

ORDER BY 2 DESC;

ON P.brand\_id = B.brand\_id

brand_name	total_sales
Trek	4602754.35
Electra	1205320.82
Surly	949507.06
Sun Bicycles	341994.93
Haro	185384.55
Heller	171459.08
Pure Cycles	149476.34
Ritchey	78898.95
Strider	4320.48

## **6.Orders by Customer Region**

Analyze orders by customers' state to determine the most active regions.

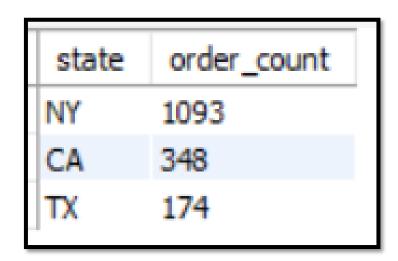
SELECT C.state, COUNT(O.order\_id) AS order\_count
FROM customers C

JOIN orders O

ON C.customer\_id = O.customer\_id

GROUP BY 1

ORDER BY 2 DESC;



## 7.Total Sales per Store

#### Calculate the total sales for each store

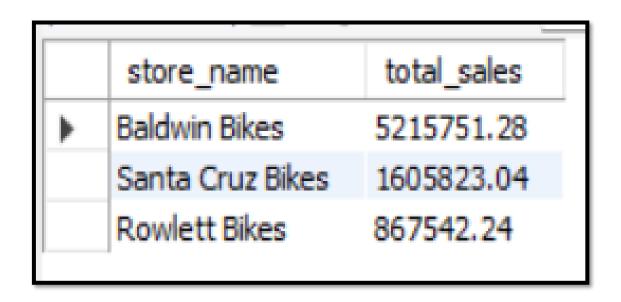
SELECT S.store\_name, ROUND(SUM(OI.quantity \* OI.list\_price \* (1-OI.discount)),2) AS total\_sales
FROM orders O

JOIN stores S
ON O.store\_id = S.store\_id

JOIN order\_items OI
ON O.order\_id = OI.order\_id

GROUP BY 1

ORDER BY 2 DESC;



#### **8.Customer with Most Orders**

Find the customer who has placed the most orders.

```
SELECT C.first_name, C.last_name, COUNT(O.order_id) AS order_count

FROM customers C

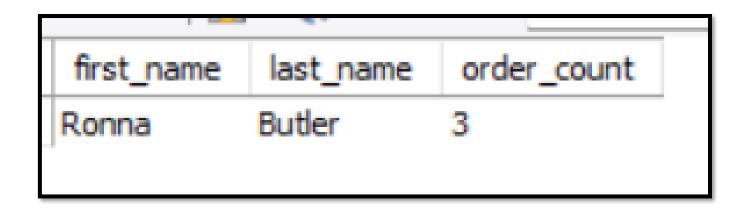
JOIN orders O

ON C.customer_id = O.customer_id

GROUP BY C.customer_id, 1, 2

ORDER BY 3 DESC

LIMIT 1;
```



# 9. Average Order Value by Store

Calculate the average order value for each store.

```
SELECT S.store_name, ROUND(AVG(OI.quantity * OI.list_price),2) AS avg_order_value
FROM orders O

JOIN stores S

ON O.store_id = S.store_id

JOIN order_items OI

ON O.order_id = OI.order_id

GROUP BY 1

ORDER BY 2 DESC;
```

store_name	avg_order_value
Rowlett Bikes	1847.6
Baldwin Bikes	1823.55
Santa Cruz Bikes	1779.47

## 10.Most Common Product Pairs Purchased Together

Identify the most common pairs of products that are purchased together in the same order.

SELECT p1.product\_name AS product\_1, p2.product\_name AS product\_2, COUNT(\*) AS times\_bought\_together
FROM order\_items oi1

JOIN order\_items oi2

ON oi1.order\_id = oi2.order\_id AND oi1.product\_id < oi2.product\_id

JOIN products p1

ON oi1.product\_id = p1.product\_id

JOIN products p2 ON oi2.product\_id = p2.product\_id

GROUP BY 1, 2

ORDER BY 3 DESC

LIMIT 5;

product_1	product_2	times_bought_together
Electra Cruiser 1 (24-Inch) - 2016	Electra Girl's Hawaii 1 (16-inch) - 2015/2016	27
Electra Townie Original 21D - 2016	Electra Cruiser 1 (24-Inch) - 2016	22
Trek Slash 8 27.5 - 2016	Electra Townie Original 21D - 2016	22
Electra Girl's Hawaii 1 (16-inch) - 2015/2016	Electra Girl's Hawaii 1 (20-inch) - 2015/2016	22
Electra Cruiser 1 (24-Inch) - 2016	Electra Girl's Hawaii 1 (20-inch) - 2015/2016	21