



What are the top 5 most selling product?

1. Most Popular Product



```
SELECT ss.store_id, COUNT(ps.quantity) AS quantity
FROM production_stocks AS ps
JOIN sales_stores AS ss ON ps.store_id = ss.store_id
GROUP BY ss.store_id
ORDER BY ss.store_id
```

	product_id integer 	total_quantity_sold bigint 
1	6	167
2	13	157
3	16	156
4	7	154
5	23	154

Provide an overview of the current inventory status, including the count of products in stock for each store.

2. Inventory Status

```
SELECT ss.store_id, COUNT(ps.quantity) AS quantity
FROM production_stocks AS ps
JOIN sales_stores AS ss ON ps.store_id = ss.store_id
GROUP BY ss.store_id
ORDER BY ss.store_id
```

	store_id [PK] integer 	quantity bigint 
1	1	313
2	2	313
3	3	313

Calculate the processing time for orders and identify the staff members with slower processing time.

3. Staff Productivity




```
SELECT so.store_id, so.staff_id, CONCAT(ss.first_name, ' ', ss.last_name) AS staff_name,  
       MAX(so.shipped_date - so.order_date) AS processing_days  
FROM sales_orders AS so  
JOIN sales_staffs AS ss ON ss.staff_id = so.staff_id  
GROUP BY so.store_id, so.staff_id, staff_name  
ORDER BY processing_days
```

	store_id integer	staff_id integer	staff_name text	processing_days integer
1	3	8	Kali Vargas	3
2	2	6	Marcelene Boyer	3
3	1	3	Genna Serrano	3
4	3	9	Layla Terrell	3
5	2	7	Venita Daniel	3
6	1	2	Mireya Copeland	3

How many orders were placed at each store?

4. Store Performance





```
SELECT so.store_id, ss.store_name, SUM(so.order_status) AS total_orders
FROM sales_orders AS so
JOIN sales_stores AS ss ON so.store_id = ss.store_id
GROUP BY so.store_id, ss.store_name
ORDER BY total_orders DESC
```

	store_id integer 	store_name character varying (255) 	total_orders bigint 
1	2	Baldwin Bikes	4209
2	1	Santa Cruz Bikes	1251
3	3	Rowlett Bikes	643

Compare the sales performance of each store in terms of total revenue and average order value.

5. Store Comparison




```
SELECT ss.store_id, ss.store_name,  
       ROUND(SUM(soi.list_price * soi.quantity * (1 - soi.discount))) AS total_revenue,  
       ROUND(AVG(soi.list_price * soi.quantity * (1 - soi.discount))) AS avg_order_value  
FROM sales_orders so  
JOIN sales_order_items soi ON so.order_id = soi.order_id  
JOIN sales_stores ss ON so.store_id = ss.store_id  
GROUP BY ss.store_id, ss.store_name  
ORDER BY total_revenue DESC
```

	store_id [PK] integer 	store_name character varying (255) 	total_revenue numeric 	avg_order_value numeric 
1	2	Baldwin Bikes	5215751	1632
2	1	Santa Cruz Bikes	1605823	1596
3	3	Rowlett Bikes	867542	1665

How has the total sales revenue changed over the previous quarters?

6. Sales Growth Over Time





```
SELECT EXTRACT(YEAR FROM so.order_date) AS order_year,  
       EXTRACT(QUARTER FROM order_date) AS order_quarter,  
       ROUND(SUM(soi.list_price * soi.quantity * (1 - soi.discount))) AS total_sales  
FROM sales_orders so  
JOIN sales_order_items soi ON so.order_id = soi.order_id  
GROUP BY order_quarter, order_year  
ORDER BY order_year, order_quarter
```

	order_year numeric 	order_quarter numeric 	total_sales numeric 
1	2016	1	551859
2	2016	2	582976
3	2016	3	698306
4	2016	4	594237
5	2017	1	907452
6	2017	2	874390
7	2017	3	813954

Identify the top 10 customers who have made the most purchases.

7. Customer Loyalty

```
WITH customer_rank AS(SELECT so.customer_id, SUM(so.order_status) AS total_orders,  
    RANK() OVER(PARTITION BY so.customer_id ORDER BY SUM(so.order_status) DESC)  
    FROM sales_orders AS so  
    JOIN sales_customers AS sc ON sc.customer_id = so.customer_id  
    GROUP BY so.customer_id  
    ORDER BY total_orders DESC  
)  
SELECT cr.customer_id, sc.first_name, sc.last_name, cr.total_orders  
FROM customer_rank as cr  
JOIN sales_customers as sc ON sc.customer_id = cr.customer_id  
ORDER BY cr.total_orders DESC, cr.customer_id LIMIT 10
```

	customer_id  integer	first_name  character varying (255)	last_name  character varying (255)	total_orders  bigint
1	4	Daryl	Spence	9
2	6	Lyndsey	Bean	9
3	7	Latasha	Hays	9
4	10	Pamelia	Newman	9
5	12	Robby	Sykes	9
6	13	Lashawn	Ortiz	9
7	16	Emmitt	Sanchez	9
8	18	Georgetta	Hardin	9
9	19	Lizzette	Stein	9
10	21	Tobie	Little	9

For each product category, identify the top-selling product based on total sales.

8. Category-wise Top Products

```
WITH ranked_products AS (  
    SELECT pp.category_id, pp.product_id, pp.product_name, soi.list_price, soi.quantity,  
           RANK() OVER (PARTITION BY pp.category_id ORDER BY SUM(soi.list_price * soi.quantity  
DESC) AS product_rank  
    FROM production_products pp  
    JOIN sales_order_items soi ON pp.product_id = soi.product_id  
    GROUP BY pp.category_id, pp.product_id, pp.product_name, soi.list_price, soi.quantity  
)  
SELECT category_id, product_id, product_name, list_price, quantity  
FROM ranked_products  
WHERE product_rank = 1
```

	category_id integer 🔒	product_id bigint 🔒	product_name character varying (255) 🔒	list_price numeric (10,2) 🔒	quantity integer 🔒
1	1	23	Electra Girl's Hawaii 1 (20-inch) - 2015/2016	299.99	2
2	2	26	Electra Townie Original 7D EQ - 2016	599.99	2
3	3	16	Electra Townie Original 7D EQ - 2016	599.99	2
4	4	11	Surly Straggler 650b - 2016	1680.99	2
5	5	9	Trek Conduit+ - 2016	2999.99	2
6	6	7	Trek Slash 8 27.5 - 2016	3999.99	2
7	7	56	Trek Domane SLR 6 Disc - 2017	5499.99	2