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Data Analysis for Jensen’s

insights on Customer Behavior Staff Performance, Inventory Management, and Store

Presented by Nidhi

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Project Flow

- Project Objective
- SQL Queries
- Business Overview
- Conclusion

Project Objective

- SQL Query Utilization : Conducting in-depth analysis of various business aspects such as customer behavior, staff performance, inventory management, and store operations.
- Operational Enhancement : Using data insights to improve operational efficiency, streamline processes, and reduce costs.
- Customer Experience : Enhancing customer satisfaction by identifying trends and patterns that lead to better service and product offerings.
- Sales Growth*: Driving sales growth through data-driven strategies that align with business goals and customer needs.

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01

Calculate the cumulative sum of quantities sold for each product over time.

```
lect order_items.product_id,
ders.order_date,
der_items.quantity,
m(order_items.quantity) over(partition by product_id order by orders.order_date)
mulative_quantity
om order_items join orders on order_items.order_id = orders.order_id
d orders.order_status =4
der by product_id,orders.order_date;
```

02

02

Find the total number of products sold by each store along with the store name.

```
SELECT
    stores.store_name,
    SUM(order_items.quantity) AS total_quantity
FROM
    orders
        JOIN
    order_items ON order_items.order_id = orders.order_id
        JOIN
    stores ON stores.store_id = orders.store_id
GROUP BY stores.store_name;
```

```
products.category_id,
order_items.list_price,
sum(order_items.quantity) toal_qun_sold,
sum(order_items.quantity*(order_items.list_price-order_items.discount))  total_sales
from order_items join products on order_items.product_id = products.product_id
group by order_items.product_id,
products.category_id,
order_items.list_price),
ranked_prod AS(
select product_id,
category_id,
total_sales,
ROW_NUMBER() over(partition by category_id order by total_sales desc) rn
from product_sales)

select product_id,category_id,total_sales
```

03

Find the product with the highest total sales (quantity * price) for each category.

04 Find the customer who spent the most money on orders.

```
with a as ( select customers.customer_id ,
concat(customers.first_name, customers.last_name) full_name,
sum (order_items.quantity*
(order_items.list_price-order_items.discount)
) sales
from customers join orders
on customers.customer_id = orders.customer_id
join order_items
on orders.order_id = order_items.order_id
group by customers.customer_id ,
concat(customers.first_name, customers.last_name))
```

04

```
select * from
( select *, rank() over (order  by sales desc ) rnk
from a ) b
where rnk = 1 ;
```

Parmelia Newman is the customer who spent the most money on orders.
Total Sales - $3,780140

05 Find the highest-priced product for each category name

```
        with rank_t as(
SELECT
    products.product_id,products.product_name,
    products.category_id,products.list_Price, rank()
    Over( partition by category_id order by list_Price desc) as
    rank_
    from
    products
    order by category_id
    )
    select* from rank_t
    where rank_ = 1;
```

Our Highest-Price bike

Electra Bikes

The Electra Townie sets the standard in comfort and control, making it the perfect ride-around-town bike.

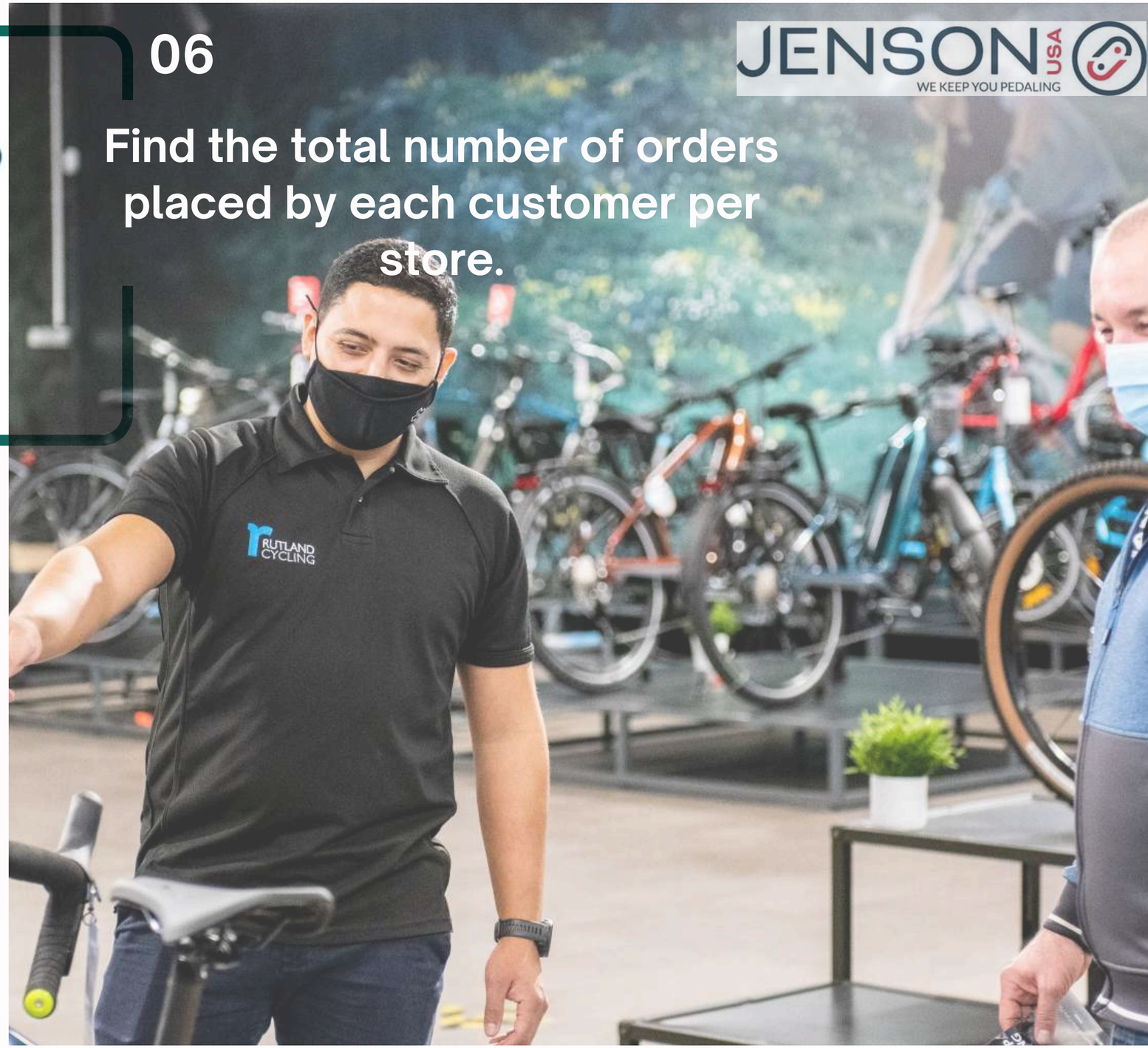
Trek superfly

Air suspension RockShox works like silk, Hydraulic Brakes Shimano are very efficient and the front and rear Derailleur and make very rapid changes. If you are one of those who go for a walk around town and some weekends going to the mountains this is your perfect ride.

```sql
SELECT
    store_id, customer_id, COUNT(order_id)
FROM
    orders
GROUP BY store_id , customer_id;
```

06

Find the total number of orders placed by each customer per store.



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07 Find the names of staff members who have not made any sales.

```sql
SELECT
    staffs.staff_id,
    CONCAT(staffs.first_name, ' ', staffs.last_name) full_name
FROM
    staffs
WHERE
    NOT EXISTS( SELECT
            staff_id
        FROM
            orders
        WHERE
            orders.staff_id = staffs.staff_id);
```

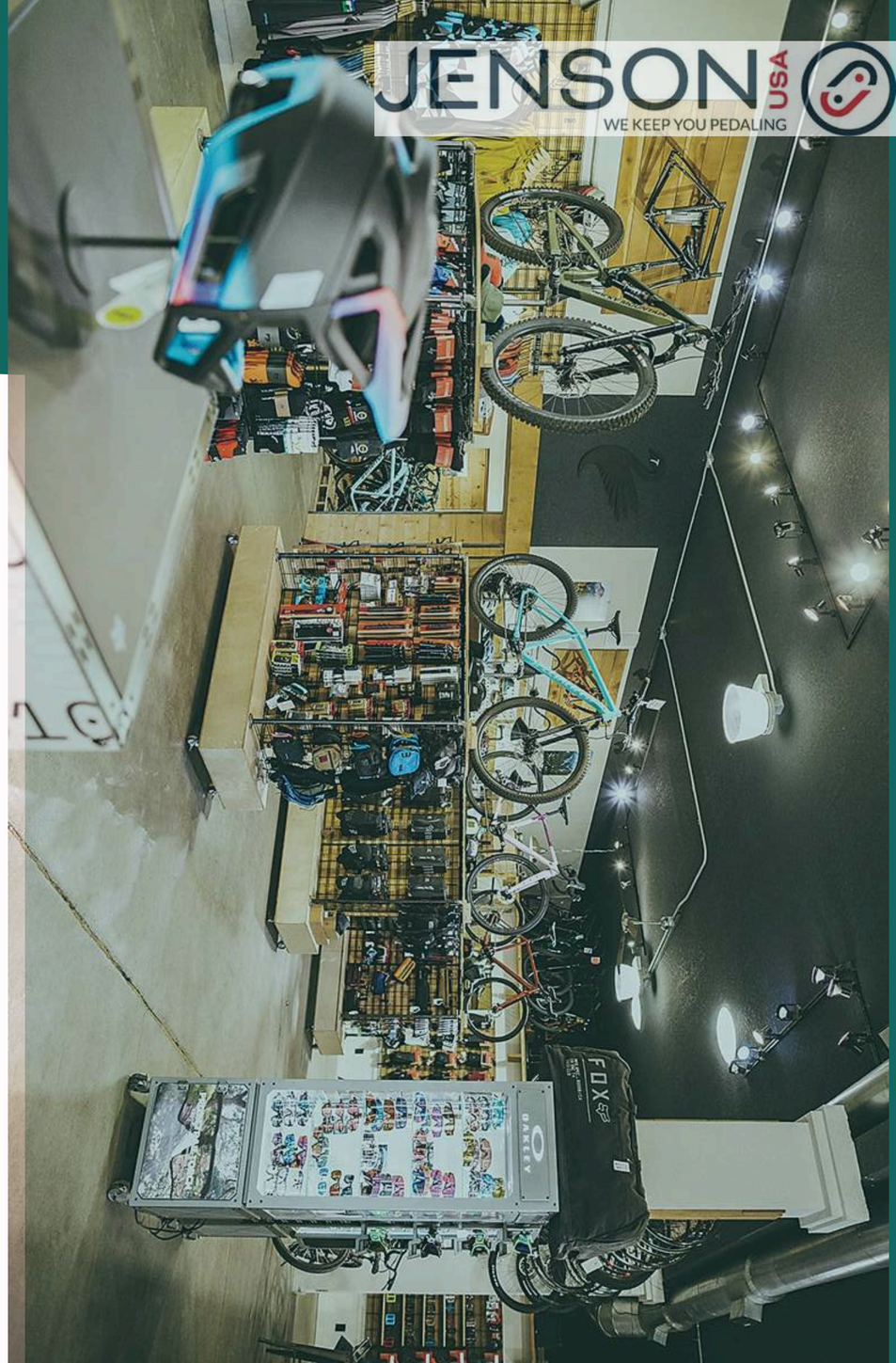
08 Find the median value of the price list.

```sql
with m as (select list_price, row_number()
 over (order by  list_price) rn,
 count(list_price) over cn
from order_items)


select case
when cn % 2 =0 then ( select avg(list_price) from m
where rn in (cn/2, (cn/2) +1))
else (select list_price from m where rn =(cn+1)/2)
end  as median from m limit 1;
```

09 Find the top 3 most sold products in terms of quantity.

```sql
select product_name
 from
(select products.product_id,products.product_name,
sum(order_items.quantity) quantity, rank()
over (order by sum(order_items.quantity) desc)rnk
from
products
join
order_items
on products.product_id = order_items.Product_id
group by products.product_id,products.product_name) a
where rnk <=3;
```



10 List all products that have never been ordered.(use Exists)

```
SELECT
    products.product_id, products.product_name
FROM
    products
WHERE
    NOT EXISTS( SELECT
            product_id
        FROM
            order_items
        WHERE
            order_items.product_id = products.product_id);
```

Everest Cantu Olivia Wilson Aaron Loeb

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11 List the names of staff members who have made more sales than the average number of sales by all staff members.

```
select staffs.staff_id
coalesce (sum (order_items quantity *
(order_items .list_price-order_items.discount)),0) sales
from orders right join staffs
on staffs.staff_id  = order.staff_id
left join order_items
on orders.order_id = order_items.order_id
group by staff.staff_id
having (sum (order_items quantity*
(order_items .list_price-order_items.discount))>

(select  avg(sales) from
(select staff.staff_id,
coalesce (sum (order_items quantity*
(order_items .list_price-order_items.discount)),0) sales
from orders right join staff
on staff.staff_id = order_items.order_id
group by staff.staff_id) as a);
```

12 Identify the customers who have ordered all types of products (i.e., from every category).

```sql
SELECT
    customers.customer_id
FROM
    customers
        JOIN
    orders ON customers.customer_id = orders.customer_id
        JOIN
    order_items ON order_items.order_id = orders.order_id
        JOIN
    products p ON p.product_id = order_items.product_id
GROUP BY customers.customer_id
HAVING COUNT(DISTINCT p.category_id) = (SELECT
        COUNT(category_id)
    FROM
        categories);
```




Business Overview

This project aims to analyze sales data to optimize store performance, improve customer targeting, and refine product inventory. By identifying key sales trends and customer behaviors, we can make informed decisions that enhance profitability and operational efficiency.

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Conclusion

Through targeted data analysis at Jenson USA, we've identified critical insights that optimize operations, enhance customer satisfaction, and drive sales growth. This ongoing data-driven approach will continue to support the company's success and market competitiveness.

THANK TOU

For watching this presentation

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