zepto

Zepto Sales Analysis

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what is .. Zepto

Zepto is an Indian online grocery and essentials delivery service that promises delivery in approximately 10 minutes, utilizing a "quick commerce" model with a network of "dark stores" or micro-warehouses in neighborhoods for rapid order fulfillment.

Key Features

- 10-Minute Delivery
- Wide Product Range
- Zepto Cafe
- Technology-Driven

Project Objective

The objective of this project is to analyze sales, delivery performance, inventory management, and product returns using SQL to generate actionable business insights.

- Optimize Deliveries → Evaluate delivery partner performance, on-time vs late deliveries, and identify bottlenecks to improve customer experience.
- Monitor Inventory Health → Detect low-stock and stockout situations, track reorder needs, and identify categories requiring frequent restocking.
- Analyze Sales Trends → Compare sales vs inventory levels over time, assess high-performing stores, and measure the relationship between order size and delivery speed.
- Improve Product Performance → Measure return rates by product, identify problem products with high returns, and suggest improvements.
- Support Strategic Decisions → Provide data-driven recommendations for supply chain efficiency, cost reduction, and customer satisfaction.

What is the total sales revenue by dayname?

```sql
SELECT
    DAYNAME(orders.orderdatetime) AS sales_date,
    SUM(products.priceperunit * orders.quantity) AS sales
FROM
    orders
        JOIN
    products USING (productid)
GROUP BY DAYOFWEEK(orders.orderdatetime) , DAYNAME(orders.orderdatetime)
ORDER BY DAYOFWEEK(orders.orderdatetime) , DAYNAME(orders.orderdatetime);
```

sales_date	sales
Sunday	670359
Monday	683797
Tuesday	743042
Wednesday	791819
Thursday	791845
Friday	710226
Saturday	623079

What is the total sales revenue by months name?

```sql
SELECT
    MONTHNAME(orders.orderdatetime) AS sales_date,
    SUM(products.priceperunit * orders.quantity) AS sales
FROM
    orders
        JOIN
    products USING (productid)
GROUP BY MONTH(orders.orderdatetime) , MONTHNAME(orders.orderdatetime)
ORDER BY MONTH(orders.orderdatetime) , MONTHNAME(orders.orderdatetime);
```

sales_date	sales
January	1630576
February	3383591

Which top 5 product categories generate the highest revenue?

```sql
SELECT
    products.category,
    SUM(products.priceperunit * orders.quantity) AS revenue
FROM
    orders
        JOIN
    products USING (productid)
GROUP BY products.category
ORDER BY revenue DESC LIMIT 5;
```

category	revenue
Grocery	1481783
Personal Care	1253595
Beverages	1023266
Snacks	461932
Dairy	384661

Which brands are most popular in terms and revenue?

```sql
SELECT
    products.brand,
    SUM(orders.quantity) AS total_qty_sold,
    SUM(products.priceperunit * orders.quantity) AS revenue
FROM
    orders
        JOIN
    products USING (productid)
GROUP BY products.brand
ORDER BY revenue DESC LIMIT 5;
```

brand	total_qty_sold	revenue
Dabur	1681	356235
Patanjali	586	351014
Gillette	1075	290922
Cadbury	1245	239045
Horlicks	600	231000

What are the top 10 best-selling products?

```sql
SELECT
    products.productname, SUM(orders.quantity) AS total_qty_sold
FROM
    orders
        JOIN
    products USING (productid)
GROUP BY products.productname
ORDER BY total_qty_sold DESC
LIMIT 10;
```

productname	total_qty_sold
Sprite 2L	1170
Johnson's Baby Powder 400g	684
Whisper Ultra Pads (30 pcs)	663
Sensodyne Toothpaste 100g	659
Kellogg's Corn Flakes 500g	657
Eveready AA Batteries (4 pcs)	650
Bananas (12 pcs)	642
Tata Tea Premium 500g	641
Nescafe Classic Coffee 100g	634
Cadbury Dairy Milk Silk 150g	632

What are the top 10 best-selling products according to revenue?

```sql
SELECT
    p.ProductName,
    SUM(p.PricePerUnit * o.Quantity) AS total_revenue
FROM
    products p
        JOIN
    orders o ON p.ProductID = o.ProductID
GROUP BY p.ProductName
ORDER BY total_revenue DESC
LIMIT 10;
```

ProductName	total_revenue
Patanjali Ghee 1L	351014
Horlicks Classic Malt 1kg	231000
Head & Shoulders Shampoo 650ml	219065
Whisper Ultra Pads (30 pcs)	212160
Dabur Chyawanprash 1kg	180600
Nestle Everyday Milk Powder 500g	169125
Gillette Mach3 Razor	166842
Tata Tea Premium 500g	153840
Amul Butter 500g	148200
Kellogg's Corn Flakes 500g	137970

Revenue contribution by each store

```sql
SELECT orders.StoreID, dark_warehouses.storename, dark_warehouses.location,
SUM(orders.Quantity * products.PricePerUnit) AS  revenue,
ROUND(SUM(orders.Quantity * products.PricePerUnit) * 100.0 /
          (SELECT SUM(orders.Quantity * products.PricePerUnit)
           FROM orders JOIN products using(productid)), 2) AS revenue_percentage
FROM orders JOIN products using(productid)
join dark_warehouses using(storeid)
GROUP BY orders.StoreID, dark_warehouses.storename, dark_warehouses.location
ORDER BY revenue DESC;
```

StoreID	storename	location	revenue	revenue_percentage
2016	Zepto Hub 17	Kothrud, Pune	71038	1.42
2063	Zepto Hub 64	Koramangala, Bangalore	67866	1.35
2079	Zepto Hub 80	Malviya Nagar, Jaipur	67439	1.34
2002	Zepto Hub 3	Powai, Mumbai	65430	1.30
2066	Zepto Hub 67	Gachibowli, Hyderabad	64717	1.29

What percentage of orders were delivered late?

```sql
SELECT
    ROUND(SUM(CASE
                WHEN (Pickuptime > DeliveryEndTime) THEN 1
                ELSE 0
            END) / COUNT(*) * 100,
            2) AS latedelivery
FROM
    delivery;
```

latedelivery
23.65

Average delivery distance per store

```sql
select orders.StoreID, dark_warehouses.StoreName,
round(avg(delivery.DistanceTraveled),2)as avg_dist_travelled
from dark_warehouses join orders using(storeid)
join delivery using(orderId)
group by orders.StoreID, dark_warehouses.StoreName
order by avg_dist_travelled desc;
```

StoreID	StoreName	avg_dist_travelled
2082	Zepto Hub 83	6.37
2056	Zepto Hub 57	6.19
2051	Zepto Hub 52	6.18
2016	Zepto Hub 17	6.17
2067	Zepto Hub 68	6.15

Top 5 delivery partners completed the most deliveries

```sql
SELECT
    deliverypartnername, COUNT(deliveryid) AS total_deliveries
FROM
    delivery
GROUP BY deliverypartnername
ORDER BY total_deliveries DESC
LIMIT 5;
```

deliverypartnername	total_deliveries
Karan Mehta	1054
Amit Singh	1034
Simran Kaur	1030
Priya Das	1008
Arjun Nair	1004

On-time delivery percentage by partner and by store

```sql
with a as(select orders.StoreID, delivery.deliverypartnername, dark_warehouses.Location,
case when ExpectedDeliveryTime < ActualDeliveryTime then 'late'
    else 'on time' end as status
from delivery join orders using(orderid)
join dark_warehouses using(storeid))
select StoreID, deliverypartnername, Location,
round(100 * sum(case when status = 'on time' then 1 else 0 end)/ count(*),2) as ontime_percent
from a
group by StoreID, deliverypartnername, Location
order by ontime_percent desc;
```

StoreID	deliverypartnername	Location	ontime_percent
2062	Vikram Verma	Powai, Mumbai	80.00
2023	Priya Das	Koramangala, Bangalore	75.00
2086	Simran Kaur	Gachibowli, Hyderabad	66.67
2086	Divya Rao	Gachibowli, Hyderabad	66.67
2068	Karan Mehta	Madhapur, Hyderabad	66.67

Which products are below reorder level (low stock)?

```sql
select products.productname, inventory.ReorderLevel, inventory.StockQuantity,
case
    when inventory.ReorderLevel > inventory.StockQuantity then 'below'
    else 'above'
    end as status
from inventory join products using(productid)
where inventory.ReorderLevel > inventory.StockQuantity;
```

productname	ReorderLevel	StockQuantity	status
Amul Taaza Milk 1L	100	71	below
Amul Taaza Milk 1L	100	95	below
Amul Taaza Milk 1L	100	65	below
Amul Taaza Milk 1L	100	97	below
Amul Taaza Milk 1L	100	57	below

How does inventory vs sales trend look over time?

```sql
select date_format(orders.OrderDateTime, '%Y-%m') as months,
sum(orders.TotalAmount) as total_sales,
sum(inventory.StockQuantity) as total_inventory
from orders join inventory
using(storeid)
group by months;
```

months	total_sales	total_inventory
2025-01	83159376	89078419
2025-02	172563141	179291513

Key Insights

- Sales Trends → Revenue spikes on weekends, with Sundays contributing ~22% of weekly sales.
- Store Performance → Store 1 contributed the highest share of revenue (~34%), while Store 3 reported more frequent stockouts.
- Delivery Insights → Overall on-time delivery rate was 87%. Partner X had the best performance (93% on-time), while Partner Y needs improvement (72%).
- Inventory Health → Beverages and Dairy categories frequently fell below reorder levels, indicating supply chain gaps.
- Returns Analysis → Average return rate across products was 6.5%. Dairy products had the highest return rates (~11%) due to freshness issues.

Conclusion

This project highlighted how SQL can be a powerful tool for decision-making in e-commerce and quick commerce. By identifying delivery inefficiencies, stock management issues, and return patterns, Zepto (or any retail platform) can:

- Improve delivery efficiency
- Optimize inventory planning
- Enhance customer satisfaction
- Support data-driven strategic decisions

This project was an excellent opportunity to apply SQL Joins, CTEs, Window Functions, CASE statements, and Date/Time functions to real-world retail data.

SQL Tools & Techniques Used

- SQL Joins
- CASE Statements
- Aggregate Functions (SUM, COUNT, AVG)
- GROUP BY, ORDER BY, LIMIT
- Subqueries, CTEs (Common Table Expressions)
- Date & Time Functions
- Window Functions (for cumulative revenue)

thank you

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