SQL
PROJECT

SALES ANALYSIS

Mastering the Art of Persuasion

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STORE BACKGROUND

A RETAIL STORE CHAIN TRACKS DAILY SALES TRANSACTIONS,INCLUDING ORDER DETAILS,CUSTOMER INFO,PRODUCT CATEGORIES,ORDER DETAIL AND ORDER STATUS.

THE BUSINESS WANTS TO OPTIMIZE OPERATIONS,IMPROVE CUSTOMER EXPERIENCE AND INCREASE PROFITABILITY USING DATA DRIVEN DECISIONS

PROBLEM STATEMENT

BECAUSE OF THIS,THEY ARE MISSING CHANCES TO EARN MORE,LOOSING CUSTOMER AND MAKING POOR BUSINESS DECISIONS

PROBLEM

THE STORE DOESN'T HAVE A CLEAR IDEA ABOUT

*which products sell the most

*customer preference

*which items bring in the profit

*where things are going wrong in delivery or operations

SOLUTION

***They need proper reports and simple insights to understand their sales,customers and product performance**

WHY IT NEED TO BE SOLVED

WITHOUT PROPER INSIGHTS:

*MISSED SALES OPPURTUNITY

*POOR INVENTORY AND STAFFING DECISIONS

*INCREASED OPERATIONAL COSTS

*LOW CUSTOMER SATISFACTION

*INACCURATE BUSINESS FORECATSA

SOLVING THIS WILL HELP INCREASE REVENUE,IMPROVE SERVICE QUALITY, OPTIMIZE OPERATIONS

BUSINESS PROBLEMS?

WHAT ARE THE TOP 5 MOST SELLING PRODUCTS BY QUANTITY?

```sql
select sum(quantity) as total_quantity_sold,product_name from sales
where status = "delivered"
group by product_name
order by total_quantity_sold desc
limit 5;
```

total_quantity_sold	product_name
70	Wardrobe
69	Vegetables
66	Sofa
65	Dining Table
60	Fruits

WHICH PRODUCT ARE MOST FREQUENTLY CANCELLED?

```sql
select count(status) as total_cancelled,product_name from sales
where status = "cancelled"
group by product_name
order by total_cancelled desc
limit 5;
```

total_cancelled	product_name
24	Comics
23	Sweater
21	Chair
21	Vegetables
20	Smartphone

WHAT TIME OF A DAY HAS A HIGHIEST NUMBER OF PURCHASES?

```sql
select
case
when extract(HOUR from time_of_purchase) between 0 and 5 then 'night'
when extract(HOUR from time_of_purchase) between 6 and 11 then 'morning'
when extract(HOUR from time_of_purchase) between 12 and 17 then 'afternoon'
when extract(HOUR from time_of_purchase) between 18 and 23 then 'evening'
end as time_of_day,
count(*) as purchase_count
from sales
group by case
when extract(HOUR from time_of_purchase) between 0 and 5 then 'night'
when extract(HOUR from time_of_purchase) between 6 and 11 then 'morning'
when extract(HOUR from time_of_purchase) between 12 and 17 then 'afternoon'
when extract(HOUR from time_of_purchase) between 18 and 23 then 'evening'
end
order by purchase_count desc
;
```

time_of_day	purchase_count
evening	516
morning	516
night	496
afternoon	476

WHO ARE THE TOP 5 HIGHIEST SPENDING CUSTOMERS?

```sql
select customer_name, sum(price*quantity) as total_spend
from sales
group by customer_name
order by total_spend desc
limit 5;
```

customer_name	total_spend
Darshit Mann	507530
Anahita Shenoy	455637
Saira Ahluwalia	447933
Gatik Khare	386156
Samaira Subramaniam	357388

WHICH PRODUCT CATEGORIES GENERATE THE HIGHEST REVENUE?

```sql
select product_category,sum(price*quantity) as revenue
from sales
group by product_category
order by revenue desc
limit 4;
```

	product_category	revenue
▶	Accessories	10365306
	Clothing	10258731
	Books	9932469
	Furniture	9659478

WHAT IS THE MOST PREFERRED PAYMENT MODE?

```
select payment_mode,count(payment_mode) as total_count from sales
group by payment_mode
order by total_count desc;
```

payment_mode	total_count
EMI	351
Debit Card	344
CC	338
Cash	334
UPI	327
Credit Card	310

HOW DOES AGE GROUP AFFECT PURCHASING BEHAVIOUR?

```sql
select
case
when (customer_age )BETWEEN 18 and 25 then '18-25'
when (customer_age )BETWEEN 26 and 35 then '26-35'
when (customer_age )BETWEEN 36 and 45 then '36-45'
when (customer_age )BETWEEN 46 and 55 then '46-55'
else '55+'
end as customer_age,
sum(price*quantity) as total_purchase
from sales
 group by case
 when (customer_age )BETWEEN 18 and 25 then '18-25'
when (customer_age )BETWEEN 26 and 35 then '26-35'
when (customer_age )BETWEEN 36 and 45 then '36-45'
when (customer_age )BETWEEN 46 and 55 then '46-55'
else'55+'
end
order by total_purchase desc;
```

customer_age	total_purchase
26-35	13688989
36-45	13395090
46-55	12008479
18-25	11558780
55+	8582949

WHAT IS THE CANCELLATION RATE PER PRODUCT CATEGORY?

```sql
select product_category,
count(case when status = 'cancelled' then 1 end)*100.0/count(*) as cancelled_percent
 from sales
 group by product_category
```

product_category	cancelled_percent
Books	26.42643
Clothing	25.49020
Electronics	24.59547
Accessories	23.54740
Furniture	22.83237
Groceries	22.52252

Measuring Sales Success

Track key performance indicators (KPIs), Analyze sales data to identify areas for, improvement Celebrate achievements and learn from setbacks