



# Coffee Shop Sales Analysis

# MY SQL



## FIRING SQL QUERIES TO SOLVE THE BUSINESS PROBLEMS

```
120 • select
121         month(transaction_date) as Month,
122         round(sum(transaction_qty)) as Total_Quantity_Sold,
123         round((sum(transaction_qty) - lag(sum(transaction_qty), 1)
124             over(order by month(transaction_date)))) as mom_quantity_difference
125     from
126         coffee_shop_data
127     where
128         month(transaction_date) in (4,5)
129     group by
130         month(transaction_date)
131     order by
132         month(transaction_date);
```



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## DATA CLEANING

### 1 CONVERT DATE (TRANSACTION\_DATE) COLUMN TO PROPER DATE FORMAT

```
update coffee_shop_data  
set transaction_date = str_to_date(transaction_date, '%d-%m-%Y');
```

### 2 ALTER DATE (TRANSACTION\_DATE) COLUMN TO DATE DATA TYPE

```
alter table coffee_shop_data  
modify column transaction_date date;
```

### 3 CONVERT TIME (TRANSACTION\_TIME) COLUMN TO PROPER DATE FORMAT

```
update coffee_shop_data  
set transaction_time = str_to_date(transaction_time, '%H:%i:%s ' );
```

### 4 ALTER TIME (TRANSACTION\_TIME) COLUMN TO DATE DATA TYPE

```
alter table coffee_shop_data  
modify column transaction_time time;
```



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## DATA ANALYSIS

### 1. Total Sales Analysis :-

- CALCULATE THE TOTAL SALES FOR EACH RESPECTIVE MONTH.

```
select concat((round(sum(transaction_qty * unit_price)))/1000, 'K') as Total_Sales  
from coffee_shop_data  
where  
month(transaction_date) = 5;
```

Result Grid	
	Total_Sales
▶	156.728K



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- DETERMINE THE MONTH-ON-MONTH INCREASE OR DECREASE IN SALES

```
select
    month(transaction_date) as Month,
    round(sum(transaction_qty * unit_price)) as Total_sales,
    round((sum(transaction_qty * unit_price) - lag(sum(transaction_qty * unit_price), 1)
over(order by month(transaction_date)))) as mom_sales_difference
from
    coffee_shop_data
where
    month(transaction_date) in (4,5)
group by
    month(transaction_date)
order by
    month(transaction_date);
```

Result Grid | Filter Rows:

	Month	Total_sales	mom_sales_difference
▶	4	118941	NULL
	5	156728	37787



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- CALCULATE THE DIFFERENCE IN SALES BETWEEN THE SELECTED MONTH AND THE PREVIOUS MONTH

```
select
    month(transaction_date) as Month,
    round(sum(transaction_qty * unit_price)) as Total_sales,
    (sum(transaction_qty * unit_price) - lag(sum(transaction_qty * unit_price), 1)
     over(order by month(transaction_date))) / lag(sum(transaction_qty * unit_price), 1)
     over(order by month(transaction_date)) * 100 as mom_sales_difference_percentage
from
    coffee_shop_data
where
    month(transaction_date) in (4,5)
group by
    month(transaction_date)
order by
    month(transaction_date);
```

	Month	Total_sales	mom_sales_difference_percentage
▶	4	118941	HULL
	5	156728	31.769242384551315



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 2. Total Orders Analysis:-

- CALCULATE TOTAL NO OF ORDERS FOR EACH RESPECTIVE MONTH.

```
select count(*) as Total_Orders  
from coffee_shop_data  
where  
month(transaction_date) = 5;
```

Result Grid |

	Total_Orders
▶	33527



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- DETERMINE THE MONTH-ON-MONTH INCREASE OR DECREASE IN THE NUMBERS OF ORDERS

```
select
    month(transaction_date) as Month,
    round(count(*)) as Total_Orders,
    round((count(*) - lag(count(*), 1)
    over(order by month(transaction_date)))) as mom_orders_difference
from
    coffee_shop_data
where
    month(transaction_date) in (4,5)
group by
    month(transaction_date)
order by
    month(transaction_date);
```

Result Grid | Filter Rows:

	Month	Total_Orders	mom_orders_difference
▶	4	25335	NULL
	5	33527	8192



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- CALCULATE THE DIFFERENCE IN THE NUMBERS OF ORDERS BETWEEN THE SELECTED MONTH AND THE PREVIOUS MONTH

```
select
    month(transaction_date) as Month,
    round(count(*)) as Total_Orders,
    (count(*) - lag(count(*), 1)
     over(order by month(transaction_date))) / lag(count(*), 1)
     over(order by month(transaction_date)) * 100 as mom_Orders_difference_percentage
from
    coffee_shop_data
where
    month(transaction_date) in (4,5)
group by
    month(transaction_date)
order by
    month(transaction_date);
```

Result Grid | Filter Rows:  Export:

	Month	Total_Orders	mom_Orders_difference_percentage
▶	4	25335	NULL
	5	33527	32.3347



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 3. Total Quantity Sold Analysis:-

- CALCULATE TOTAL QUANTITY SOLD FOR EACH RESPECTIVE MONTH.**

```
select sum(transaction_qty) as Total_Quantity_Sold  
from coffee_shop_data  
where  
month(transaction_date) = 5;
```

| Result Grid | Filters

	Total_Quantity_Sold
▶	48233



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- DETERMINE THE MONTH-ON-MONTH INCREASE OR DECREASE IN THE TOTAL QUANTITY SOLD.

```
select
```

```
    month(transaction_date) as Month,  
    round(sum(transaction_qty)) as Total_Quantity_Sold,  
    round((sum(transaction_qty) - lag(sum(transaction_qty), 1)  
        over(order by month(transaction_date)))) as mom_quantity_difference
```

```
from
```

```
coffee_shop_data
```

```
where
```

```
    month(transaction_date) in (4,5)
```

```
group by
```

```
    month(transaction_date)
```

```
order by
```

```
    month(transaction_date);
```

	Month	Total_Quantity_Sold	mom_quantity_difference
▶	4	36469	HULL
	5	48233	11764



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- CALCULATE THE DIFFERENCE IN THE TOTAL QUANTITY SOLD BETWEEN THE SELECTED MONTH AND THE PREVIOUS MONTH

```
select
    month(transaction_date) as Month,
    round(sum(transaction_qty)) as Total_Quantity_Sold,
    (sum(transaction_qty) - lag(sum(transaction_qty), 1)
     over(order by month(transaction_date))) / lag(sum(transaction_qty), 1)
     over(order by month(transaction_date)) * 100 as mom_quantity_difference_percentage
from
    coffee_shop_data
where
    month(transaction_date) in (4,5)
group by
    month(transaction_date)
order by
    month(transaction_date);
```

Result Grid | Filter Rows:  Export:

	Month	Total_Quantity_Sold	mom_quantity_difference_percentage
▶	4	36469	NULL
	5	48233	32.2575



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 4. Sales Charts :-

- SHOW THE TABLE THAT DISPLAY TOTAL SALES,ORDERS AND QUANTITY FOR PERTICULAR DAY

```
select
    concat(round(sum(transaction_qty * unit_price)/1000,1), 'K') as Total_Sales,
    concat(round(count(transaction_id)/1000,1), 'K') as Total_Orders,
    concat(round(sum(transaction_qty)/1000,1), 'K') as Total_Quantity
from coffee_shop_data
where
    transaction_date = '2023-05-27';
```

Result Grid | Filter Rows:

	Total_Sales	Total_Orders	Total_Quantity
▶	5.6K	1.2K	1.8K



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 5. Sales Analysis by Weekdays and Weekends :-

```
select
    case when dayofweek(transaction_date) in(1,7) then 'Weekends'
        else 'Weekdays'
    end as day_type,
    concat(round(sum(transaction_qty * unit_price)/1000,1), 'K') as Total_Sales
from
    coffee_shop_data
where
    month(transaction_date) = 5
group by
    day_type;
```

Result Grid | Filter Rows

	day_type	Total_Sales
▶	Weekdays	116.6K
	Weekends	40.1K



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 6. Sales Analysis by best store location :-

```
select
    store_location,
    concat(round(sum(transaction_qty * unit_price)/1000,1), 'K') as Total_Sales
from
    coffee_shop_data
where
    month(transaction_date) = 5
group by
    store_location
order by
    Total_Sales desc;
```

| Result Grid | Filter Rows:

	store_location	Total_Sales
▶	Hell's Kitchen	52.6K
	Astoria	52.4K
	Lower Manhattan	51.7K



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 7. Daily Sales analysis with Average

- DISPLAY DAILY SALES FOR THE SELECTED MONTH

```
select
```

```
    concat(round(avg(Total_Sales)/1000,1), 'K') as Total_Average_Sales
  from (
    select sum(transaction_qty * unit_price) as Total_Sales
      from coffee_shop_data
     where month(transaction_date) = 5
       group by transaction_date
  ) as inner_query;
```

	Result Grid			Filter
	Total_Average_Sales			
	5.1K			



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- DISPLAY DAILY SALES FOR THAT PARTICULAR MONTH SELECTED

select

```
    day(transaction_date) as Day_of_month,  
    sum(transaction_qty * unit_price) as Day_of_Total_Sales  
from coffee_shop_data  
where month(transaction_date) = 5  
group by Day_of_month  
order by Day_of_month;
```

Result Grid | Filter Rows:

	Day_of_month	Day_of_Total_Sales
▶	1	4731.449999999999
	2	4625.499999999997
	3	4714.599999999994
	4	4589.699999999995
	5	4700.999999999997
	6	4205.149999999998
	7	4542.699999999998
	8	5604.209999999995
	9	5100.969999999997
	10	5256.329999999999
	11	4850.059999999996



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

- DISPLAY THE TABLE THAT DAILY SALES DATA FOR PERTICULAR MONTH IS ABOVE AVERAGE SALES OR BELOW AVERAGE SALES

```
select day_of_month,
       case
         when Day_of_Total_Sales > avg_sales then 'Above average'
         when Day_of_Total_Sales < avg_sales then 'Below average'
         else 'Average'
       end as Sales_Status,
       Day_of_Total_Sales from (
         select day(transaction_date) as day_of_month,
                sum(transaction_qty * unit_price) as Day_of_Total_Sales,
                avg(sum(transaction_qty * unit_price)) over () as avg_sales   from
                coffee_shop_data
         where month(transaction_date) = 5
         group by day(transaction_date)  ) as Sales_data
order by day_of_month;
```

	day_of_month	Sales_Status	Day_of_Total_Sales
▶	1	Below average	4731.449999999999
	2	Below average	4625.499999999997
	3	Below average	4714.599999999994
	4	Below average	4589.699999999995
	5	Below average	4700.999999999997
	6	Below average	4205.149999999998
	7	Below average	4542.699999999998



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 8. Sales analysis by product category

select

```
product_category,  
sum(transaction_qty * unit_price) as Total_Sales  
from coffee_shop_data  
where month(transaction_date) = 5  
group by product_category  
order by Total_Sales desc;
```

	product_category	Total_Sales
▶	Coffee	60362.84999999928
	Tea	44539.84999999951
	Bakery	18565.519999999997
	Drinking Chocolate	16319.75
	Coffee beans	8768.949999999997
	Branded	2889
	Loose Tea	2395.1500000000005
	Flavours	1905.5999999999476
	Packaged Chocolate	981.0900000000009



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 9. Top 10 Products by sales

select

```
product_type,  
    sum(transaction_qty * unit_price) as Total_Sales  
from coffee_shop_data  
where month(transaction_date) = 5  
group by product_type  
order by Total_Sales desc  
limit 10;
```

Result Grid | Filter Rows:

	product_type	Total_Sales
▶	Barista Espresso	20423.749999999993
	Brewed Chai tea	17427.350000000082
	Hot chocolate	16319.75
	Gourmet brewed coffee	15559.200000000008
	Brewed herbal tea	10930
	Brewed Black tea	10778
	Premium brewed coffee	8739.199999999973
	Organic brewed coffee	8350.199999999939
	Scone	8305.279999999999
	Drip coffee	7290.5



# Coffee Shop Sales Analysis



# Coffee Shop Sales Analysis

## 10. Sales analysis by Days and Hour

select

```
round(sum(transaction_qty * unit_price),1) as Total_Sales,  
sum(transaction_qty) as Total_quantity,  
count(*) as Total_orders  
from coffee_shop_data  
where month(transaction_date) = 5 -- May Month  
and dayofweek(transaction_date) = 2 -- Monday  
and hour(transaction_time) = 10;
```

	Total_Sales	Total_quantity	Total_orders
▶	2795.3	835	588



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