

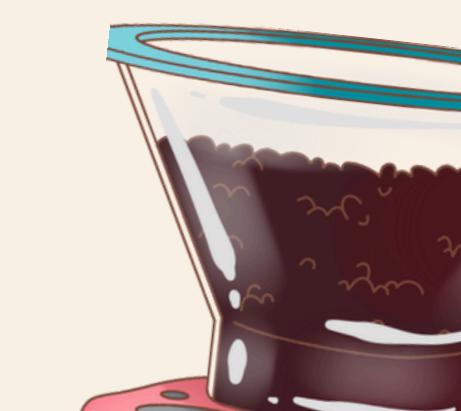
COFFEE SHOP



SELECT * FROM coffee_shop_sales;



transaction_id	transaction_date	transaction_time	transaction_qty	store_id	store_location	product_id	unit_price	product_category	product_type	product_detail
1	2023-01-01	07:06:11	2	5	Lower Manhattan	32	3	Coffee	Gourmet brewed coffee	Ethiopia Rg
2	2023-01-01	07:08:56	2	5	Lower Manhattan	57	3.1	Tea	Brewed Chai tea	Spicy Eye Opener Chai Lg
3	2023-01-01	07:14:04	2	5	Lower Manhattan	59	4.5	Drinking Chocolate	Hot chocolate	Dark chocolate Lg
4	2023-01-01	07:20:24	1	5	Lower Manhattan	22	2	Coffee	Drip coffee	Our Old Time Diner Blend Sm
5	2023-01-01	07:22:41	2	5	Lower Manhattan	57	3.1	Tea	Brewed Chai tea	Spicy Eye Opener Chai Lg
6	2023-01-01	07:22:41	1	5	Lower Manhattan	77	3	Bakery	Scone	Oatmeal Scone
7	2023-01-01	07:25:49	1	5	Lower Manhattan	22	2	Coffee	Drip coffee	Our Old Time Diner Blend Sm
8	2023-01-01	07:33:34	2	5	Lower Manhattan	28	2	Coffee	Gourmet brewed coffee	Columbian Medium Roast Sm
9	2023-01-01	07:39:13	1	5	Lower Manhattan	39	4.25	Coffee	Barista Espresso	Latte Rg
10	2023-01-01	07:39:34	2	5	Lower Manhattan	58	3.5	Drinking Chocolate	Hot chocolate	Dark chocolate Rg
11	2023-01-01	07:43:05	1	5	Lower Manhattan	56	2.55	Tea	Brewed Chai tea	Spicy Eye Opener Chai Rg
12	2023-01-01	07:44:35	2	5	Lower Manhattan	33	3.5	Coffee	Gourmet brewed coffee	Ethiopia Lg
13	2023-01-01	07:45:51	1	5	Lower Manhattan	51	3	Tea	Brewed Black tea	Earl Grey Lg
14	2023-01-01	07:48:19	1	5	Lower Manhattan	57	3.1	Tea	Brewed Chai tea	Spicy Eye Opener Chai Lg
15	2023-01-01	07:52:36	2	5	Lower Manhattan	87	3	Coffee	Barista Espresso	Ouro Brasileiro shot
16	2023-01-01	07:59:58	2	5	Lower Manhattan	47	3	Tea	Brewed Green tea	Serenity Green Tea Lg
17	2023-01-01	07:59:58	1	5	Lower Manhattan	79	3.75	Bakery	Scone	Jumbo Savory Scone
18	2023-01-01	08:00:18	1	8	Hell's Kitchen	42	2.5	Tea	Brewed herbal tea	Lemon Grass Rg
19	2023-01-01	08:00:39	2	8	Hell's Kitchen	59	4.5	Drinking Chocolate	Hot chocolate	Dark chocolate Lg
20	2023-01-01	08:11:45	1	8	Hell's Kitchen	61	4.75	Drinking Chocolate	Hot chocolate	Sustainably Grown Organic Lg
21	2023-01-01	08:17:27	2	8	Hell's Kitchen	33	3.5	Coffee	Gourmet brewed coffee	Ethiopia Lq



Business Questions

- 1).Calculate the total sales for each respective month.
- 2).Determine the month-on-month increase or decrease in sales.
- 3).Calculate the number of orders for each respective month.
- 4).Determine the month-on-month increase or decrease in number of orders.
- 5).Calculate the total quantity sold for each respective month.
- 6).Calculate the month-on-month increase or decrease in total quantity sold.
- 7).Implement a tooltip to display detailed metrics (Sales, Orders, Quantity) for a specific day.
- 8).Segment sales data into Weekdays vs Weekends to analyze performance variations.
- 9).Visualize sales data by different store locations.
- 10).Calculate the average sales of months.
- 11).Calculate the daily average sales of a month.
- 12).Find the difference between daily average sales and monthly average sales (Above/Below Average).
- 13).Calculate the total sales of each product category (Top 10).



1).Calculate the total sales for each respective month.

```
SELECT SUM(unit_price * transaction_qty) AS Total_Sales  
FROM coffee_shop_sales  
WHERE MONTH(transaction_date) = 1;
```

Output:-

	Total_Sales
▶	81677.73999999928



2).Determine the month-on-month increase or decrease in sales.

```
SELECT  
    MONTH(transaction_date) AS month,  
    ROUND(SUM(unit_price * transaction_qty)) AS total_sales,  
    (SUM(unit_price * transaction_qty) - LAG(SUM(unit_price * transaction_qty), 1)  
    OVER( ORDER BY MONTH(transaction_date))) / LAG(SUM(unit_price * transaction_qty) , 1)  
    OVER (ORDER BY MONTH (transaction_date)) * 100 AS mon_increase_percentage  
FROM  
    coffee_shop_sales  
WHERE  
    MONTH(transaction_date) IN (4 , 5)  
GROUP BY  
    MONTH(transaction_date);
```

Output:-

	month	total_sales	mon_increase_percentage
▶	4	118941	HULL
	5	156728	31.769242384551315



3).Calculate the number of orders for each respective month.

```
SELECT COUNT(transaction_id) AS total_order  
FROM coffee_shop_sales  
WHERE MONTH(transaction_date) = 3;
```

Output:-

	total_order
▶	21229



4).Determine the month-on-month increase or decrease in number of orders.

```
SELECT  
    MONTH(transaction_date) AS month,  
    COUNT(transaction_id) AS total_count,  
    (COUNT(transaction_id) - LAG(COUNT(transaction_id), 1)  
    OVER(ORDER BY MONTH(transaction_date))) / LAG(COUNT(transaction_id), 1)  
    OVER(ORDER BY MONTH(transaction_date)) * 100 AS mon_increase_order  
  
FROM  
    coffee_shop_sales  
  
WHERE  
    MONTH(transaction_date) IN (4, 5)  
  
GROUP BY  
    MONTH(transaction_date)  
  
ORDER BY  
    MONTH(transaction_date);
```

Output:-

	month	total_count	mon_increase_order
▶	4	25335	NULL
	5	33527	32.3347



5).Calculate the total quantity sold for each respective month.



```
SELECT SUM(transaction_qty) AS total_qnt  
FROM coffee_shop_sales  
WHERE MONTH(transaction_date) = 1;
```

Output:-

	total_qnt
▶	24870



6).Calculate the month-on-month increase or decrease in total quantity sold.

```
SELECT  
    MONTH(transaction_date) AS month,  
    SUM(transaction_qty) AS total_quantity,  
    (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 mon_inc_total_quantity  
FROM  
    coffee_shop_sales  
WHERE  
    MONTH(transaction_date) IN (4,5)  
GROUP BY  
    MONTH(transaction_date)  
ORDER BY  
    MONTH(transaction_date);
```

Output:-

	month	total_quantity	mon_inc_total_quantity
▶	4	36469	NULL
	5	48233	32.2575



7).Implement a tooltip to display detailed metrics (Sales, Orders, Quantity) for a specific date.

```
SELECT  
    CONCAT(ROUND(SUM(unit_price * transaction_qty)/1000,1) , 'K') AS total_sales,  
    CONCAT(ROUND(COUNT(transaction_id)/1000 , 1), 'K') AS total_order,  
    CONCAT(ROUND(SUM(transaction_qty)/1000, 1), 'K') AS total_quantity  
FROM  
    coffee_shop_sales  
WHERE  
    transaction_date = '2023-01-01';
```



Output:-

	total_sales	total_order	total_quantity
▶	2.5K	0.6K	0.8K



8). Segment sales data into Weekdays vs Weekends to analyze performance variations.

```
SELECT  
    CASE WHEN DAYOFWEEK(transaction_date) IN (1,7) THEN 'Weekends'  
    ELSE 'Weekdays'  
    END AS day_type,  
    CONCAT(ROUND(SUM(unit_price * transaction_qty)/1000,1) , 'K') AS total_sales  
FROM coffee_shop_sales  
WHERE MONTH(transaction_date) = 5  
GROUP BY  
    CASE WHEN DAYOFWEEK(transaction_date) IN (1,7) THEN 'Weekends'  
    ELSE 'Weekdays'  
    END;
```

Output:-

	day_type	total_sales
▶	Weekdays	116.6K
	Weekends	40.1K



9).Visualize sales data by different store locations.

```
SELECT  
    store_location,  
    CONCAT(ROUND(SUM(unit_price * transaction_qty)/1000,1), 'K') AS total_sales  
FROM  
    coffee_shop_sales  
WHERE  
    MONTH(transaction_date) = 5  
GROUP BY  
    store_location;
```

Output:-

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



10).Calculate the average sales of months.

```
SELECT  
    CONCAT(ROUND(AVG(total_sales)/1000,1), 'K') AS Avg_sales  
FROM  
(  
    SELECT SUM(transaction_qty * unit_price) AS total_sales  
    FROM coffee_shop_sales  
    WHERE MONTH(transaction_date) = 5  
    GROUP BY transaction_date  
) AS Internal_query;
```

Output:-

	Avg_sales
5.1K	



11).Calculate the daily average sales of a month.



SELECT

```
DAY(transaction_date) AS day_of_month,  
CONCAT(ROUND(SUM(unit_price * transaction_qty)/1000 , 1) , 'K')AS total_sales  
FROM      coffee_shop_sales  
WHERE MONTH(transaction_date) = 5  
GROUP BY DAY(transaction_date)  
ORDER BY DAY(transaction_date);
```

Output:-

	day_of_month	total_sales
▶	1	4.7K
	2	4.6K
	3	4.7K
	4	4.6K
	5	4.7K
	6	4.2K
	7	4.5K
	8	5.6K



12).Find the difference between daily average sales and monthly average sales (Above/Below Average).

```
SELECT
    day_of_month,
    CASE
        WHEN total_sales > avg_sales THEN 'Above Average'
        WHEN total_sales < avg_sales THEN 'Below Average'
        ELSE 'AVERAGE'
    END AS sales_status,
    total_sales
FROM(
    SELECT
        DAY(transaction_date) AS day_of_month ,
        CONCAT(ROUND(SUM(unit_price * transaction_qty)/1000,1),'K') AS total_sales,
        AVG(SUM(unit_price * transaction_qty)) OVER() AS avg_sales
    FROM
        coffee_shop_sales
    WHERE
        MONTH(transaction_date) = 5
    GROUP BY
        DAY(transaction_date)
    ) AS sales_data
ORDER BY day_of_month;
```

Output:-

	day_of_month	sales_status	total_sales
▶	1	Below Average	4.7K
	2	Below Average	4.6K
	3	Below Average	4.7K
	4	Below Average	4.6K
	5	Below Average	4.7K
	6	Below Average	4.2K
	7	Below Average	4.5K
	8	Below Average	5.6K



13).Calculate the total sales of each product category (Top 10).



```
SELECT
    product_type,
    CONCAT(ROUND(SUM(unit_price * transaction_qty)/1000 , 1), 'K') AS total_sales
FROM
    coffee_shop_sales
WHERE
    MONTH(transaction_date) = 5
GROUP BY
    product_type
ORDER BY SUM(unit_price * transaction_qty) DESC
LIMIT 10;
```

Output:-

	product_type	total_sales
▶	Barista Espresso	20.4K
	Brewed Chai tea	17.4K
	Hot chocolate	16.3K
	Gourmet brewed coffee	15.6K
	Brewed herbal tea	10.9K
	Brewed Black tea	10.8K
	Premium brewed coffee	8.7K
	Organic brewed coffee	8.4K
	Scone	8.3K
	Drip coffee	7.3K