# MY SQL QUERIES

## COFFEE SHOP SALES PROJECT

### CONVERT DATE (transaction_date) COLUMN TO PROPER DATE FORMAT

UPDATE coffee_shop_sales

SET transaction_date = STR_TO_DATE(transaction_date, '%d-%m-%Y');


### ALTER DATE (transaction_date) COLUMN TO DATE DATA TYPE

ALTER TABLE coffee_shop_sales

MODIFY COLUMN transaction_date DATE;


### CONVERT TIME (transaction_time)  COLUMN TO PROPER DATE FORMAT

UPDATE coffee_shop_sales

SET transaction_time = STR_TO_DATE(transaction_time, '%H:%i:%s');


### ALTER TIME (transaction_time) COLUMN TO DATE DATA TYPE

ALTER TABLE coffee_shop_sales

MODIFY COLUMN transaction_time TIME;


### DATA TYPES OF DIFFERENT COLUMNS

DESCRIBE coffee_shop_sales;

| Field | Type | Null | Key | Default | Extra |
|---|---|---|---|---|---|
| ï»¿transaction_id | int | YES | | NULL | |
| transaction_date | date | YES | | NULL | |
| transaction_time | time | YES | | NULL | |
| transaction_qty | int | YES | | NULL | |
| store_id | int | YES | | NULL | |
| store_location | text | YES | | NULL | |
| product_id | int | YES | | NULL | |
| unit_price | double | YES | | NULL | |
| product_category | text | YES | | NULL | |
| product_type | text | YES | | NULL | |
| product_detail | text | YES | | NULL | |

### CHANGE COLUMN NAME `ï»¿transaction_id` to transaction_id

ALTER TABLE coffee_shop_sales

CHANGE COLUMN `ï»¿transaction_id` transaction_id INT;

## TOTAL SALES

```sql
SELECT ROUND(SUM(unit_price * transaction_qty)) as Total_Sales
FROM coffee_shop_sales
WHERE MONTH(transaction_date) = 5 -- for month of (CM-May)
```

| | Total_Sales |
|---|---|
| ▶ | 156728 |

## TOTAL SALES KPI - MOM DIFFERENCE AND MOM GROWTH

```sql
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 mom_increase_percentage
FROM
    coffee_shop_sales
WHERE
    MONTH(transaction_date) IN (4, 5) -- for months of April and May
GROUP BY
    MONTH(transaction_date)
ORDER BY
    MONTH(transaction_date);
```

| | month | total_sales | mom_increase_percentage |
|---|---|---|---|
| ▶ | 4 | 118941 | NULL |
| | 5 | 156728 | 31.769242384551315 |

## TOTAL ORDERS

SELECT COUNT(transaction_id) as Total_Orders

FROM coffee_shop_sales

WHERE MONTH (transaction_date)= 5 -- for month of (CM-May)



| Total_Orders |
| --- |
| 33527 |

## TOTAL ORDERS KPI - MOM DIFFERENCE AND MOM GROWTH

SELECT

   MONTH(transaction_date) AS month,

   ROUND(COUNT(transaction_id)) AS total_orders,

   (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 mom_increase_percentage

FROM

   coffee_shop_sales

WHERE

   MONTH(transaction_date) IN (4, 5) -- for April and May

GROUP BY

   MONTH(transaction_date)

ORDER BY

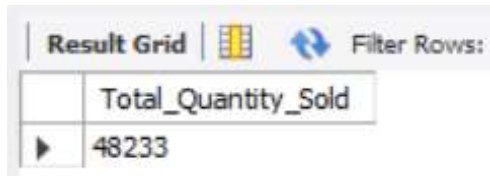   MONTH(transaction_date);



| month | total_orders | mom_increase_percentage |
| --- | --- | --- |
| 4 | 25335 | NULL |
| 5 | 33527 | 32.3347 |

## TOTAL QUANTITY SOLD

SELECT SUM(transaction_qty) as Total_Quantity_Sold

FROM coffee_shop_sales

WHERE MONTH(transaction_date) = 5 -- for month of (CM-May)

| Result Grid | Filter Rows: |
|---|---|
| Total_Quantity_Sold | |
| ▶ 48233 | |

## TOTAL QUANTITY SOLD KPI - MOM DIFFERENCE AND MOM GROWTH

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_increase_percentage

FROM

   coffee_shop_sales

WHERE

   MONTH(transaction_date) IN (4, 5)   -- for April and May

GROUP BY

   MONTH(transaction_date)

ORDER BY

   MONTH(transaction_date);

| month | total_quantity_sold | mom_increase_percentage |
|---|---|---|
| 4 | 36469 | NULL |
| 5 | 48233 | 32.2575 |

## CALENDAR TABLE – DAILY SALES, QUANTITY and TOTAL ORDERS

SELECT

   SUM(unit_price * transaction_qty) AS total_sales,
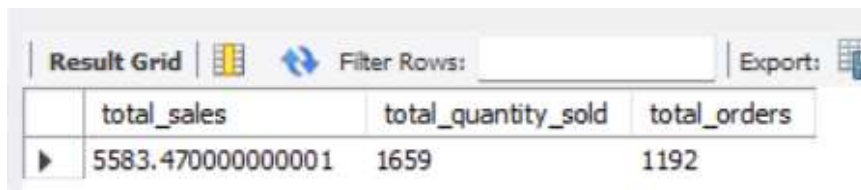
   SUM(transaction_qty) AS total_quantity_sold,

   COUNT(transaction_id) AS total_orders

FROM

   coffee_shop_sales

WHERE

   transaction_date = '2023-05-18'; --For 18 May 2023

| total_sales | total_quantity_sold | total_orders |
|---|---|---|
| 5583.470000000001 | 1659 | 1192 |

### *If you want to get exact Rounded off values then use below query to get the result:*

SELECT

   CONCAT(ROUND(SUM(unit_price * transaction_qty) / 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_sold

FROM

   coffee_shop_sales

WHERE

   transaction_date = '2023-05-18'; --For 18 May 2023
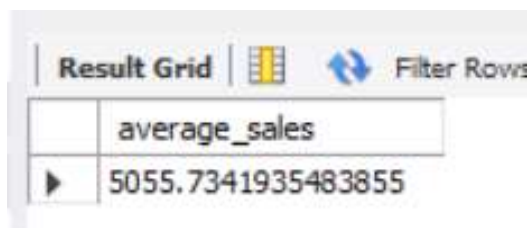
| total_sales | total_orders | total_quantity_sold |
|---|---|---|
| 5.6K | 1.2K | 1.7K |

## SALES TREND OVER PERIOD

```
SELECT AVG(total_sales) AS average_sales

FROM (

    SELECT

        SUM(unit_price * transaction_qty) AS total_sales

    FROM

        coffee_shop_sales

            WHERE

        MONTH(transaction_date) = 5  -- Filter for May

    GROUP BY

        transaction_date

) AS internal_query;
```



## DAILY SALES FOR MONTH SELECTED

```
SELECT

    DAY(transaction_date) AS day_of_month,

    ROUND(SUM(unit_price * transaction_qty),1) AS total_sales

FROM

    coffee_shop_sales

WHERE

    MONTH(transaction_date) = 5  -- Filter for May

GROUP BY

    DAY(transaction_date)

ORDER BY

    DAY(transaction_date);
```

| day_of_month | total_sales |
|---|---|
| 1 | 4731.4 |
| 2 | 4625.5 |
| 3 | 4714.6 |
| 4 | 4589.7 |
| 5 | 4701 |
| 6 | 4205.1 |
| 7 | 4542.7 |
| 8 | 5604.2 |
| 9 | 5101 |
| 10 | 5256.3 |
| 11 | 4850.1 |
| 12 | 4681.1 |
| 13 | 5511.5 |
| 14 | 5052.6 |
| 15 | 5385 |
| 16 | 5542.1 |
| 17 | 5418 |
| 18 | 5583.5 |
| 19 | 5657.9 |
| 20 | 5519.3 |
| 21 | 5370.8 |
| 22 | 5541.2 |
| 23 | 5242.9 |
| 24 | 5391.4 |
| 25 | 5230.8 |
| 26 | 5300.9 |
| 27 | 5559.2 |
| 28 | 4338.6 |
| 29 | 3959.5 |
| 30 | 4835.5 |
| 31 | 4684.1 |

**COMPARING DAILY SALES WITH AVERAGE SALES – IF GREATER THAN "ABOVE AVERAGE" and LESSER THAN "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,

    SUM(unit_price * transaction_qty) AS total_sales,

    AVG(SUM(unit_price * transaction_qty)) OVER () AS avg_sales

  FROM

    coffee_shop_sales

  WHERE

    MONTH(transaction_date) = 5  -- Filter for May

  GROUP BY

    DAY(transaction_date)

) AS sales_data

ORDER BY

   day_of_month;

| day_of_month | sales_status | 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 |
| 8 | Above Average | 5604.209999999995 |
| 9 | Above Average | 5100.969999999997 |
| 10 | Above Average | 5256.329999999999 |
| 11 | Below Average | 4850.059999999996 |
| 12 | Below Average | 4681.1299999999965 |
| 13 | Above Average | 5511.529999999999 |
| 14 | Below Average | 5052.649999999999 |
| 15 | Above Average | 5384.9800000000005 |
| 16 | Above Average | 5542.129999999997 |
| 17 | Above Average | 5418.000000000001 |
| 18 | Above Average | 5583.470000000001 |
| 19 | Above Average | 5657.880000000005 |
| 20 | Above Average | 5519.280000000003 |
| 21 | Above Average | 5370.810000000003 |
| 22 | Above Average | 5541.16 |
| 23 | Above Average | 5242.910000000001 |
| 24 | Above Average | 5391.45 |
| 25 | Above Average | 5230.8499999999985 |
| 26 | Above Average | 5300.949999999998 |
| 27 | Above Average | 5559.1500000000015 |
| 28 | Below Average | 4338.649999999998 |
| 29 | Below Average | 3959.499999999998 |
| 30 | Below Average | 4835.479999999997 |
| 31 | Below Average | 4684.129999999993 |

## SALES BY WEEKDAY / WEEKEND:

SELECT

   CASE

      WHEN DAYOFWEEK(transaction_date) IN (1, 7) THEN 'Weekends'

      ELSE 'Weekdays'

   END AS day_type,

   ROUND(SUM(unit_price * transaction_qty),2) AS total_sales

FROM

```
    coffee_shop_sales
WHERE
    MONTH(transaction_date) = 5  -- Filter for May
GROUP BY
    CASE
        WHEN DAYOFWEEK(transaction_date) IN (1, 7) THEN 'Weekends'
        ELSE 'Weekdays'
    END;
```



## SALES BY STORE LOCATION

```
SELECT
        store_location,
        SUM(unit_price * transaction_qty) as Total_Sales
FROM coffee_shop_sales
WHERE
        MONTH(transaction_date) =5
GROUP BY store_location
```

ORDER BY          SUM(unit_price * transaction_qty) DESC

| store_location | Total_Sales |
|---|---|
| ▶ Hell's Kitchen | 52598.929999999375 |
| Astoria | 52428.75999999932 |
| Lower Manhattan | 51700.06999999959 |

## SALES BY PRODUCT CATEGORY

SELECT

        product_category,

        ROUND(SUM(unit_price * transaction_qty),1) as Total_Sales

FROM coffee_shop_sales

WHERE

        MONTH(transaction_date) = 5

GROUP BY product_category

ORDER BY SUM(unit_price * transaction_qty) DESC

| product_category | Total_Sales |
|---|---|
| ▶ Coffee | 60362.8 |
| Tea | 44539.8 |
| Bakery | 18565.5 |
| Drinking Chocolate | 16319.8 |
| Coffee beans | 8768.9 |
| Branded | 2889 |
| Loose Tea | 2395.2 |
| Flavours | 1905.6 |
| Packaged Chocolate | 981.1 |

## SALES BY PRODUCTS (TOP 10)

SELECT

        product_type,

        ROUND(SUM(unit_price * transaction_qty),1) 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



## SALES BY DAY | HOUR

SELECT

   ROUND(SUM(unit_price * transaction_qty)) AS Total_Sales,

   SUM(transaction_qty) AS Total_Quantity,

   COUNT(*) AS Total_Orders

FROM

   coffee_shop_sales

WHERE

DAYOFWEEK(transaction_date) = 3 -- Filter for Tuesday (1 is Sunday, 2 is Monday, ..., 7 is Saturday)

AND HOUR(transaction_time) = 8 -- Filter for hour number 8

AND MONTH(transaction_date) = 5; -- Filter for May (month number 5)

| | Total_Sales | Total_Quantity | Total_Orders |
|---|---|---|---|
| ▶ | 2969 | 874 | 612 |

***TO GET SALES FROM MONDAY TO SUNDAY FOR MONTH OF MAY***

```
SELECT

    CASE

        WHEN DAYOFWEEK(transaction_date) = 2 THEN 'Monday'

        WHEN DAYOFWEEK(transaction_date) = 3 THEN 'Tuesday'

        WHEN DAYOFWEEK(transaction_date) = 4 THEN 'Wednesday'

        WHEN DAYOFWEEK(transaction_date) = 5 THEN 'Thursday'

        WHEN DAYOFWEEK(transaction_date) = 6 THEN 'Friday'

        WHEN DAYOFWEEK(transaction_date) = 7 THEN 'Saturday'

        ELSE 'Sunday'

    END AS Day_of_Week,

    ROUND(SUM(unit_price * transaction_qty)) AS Total_Sales

FROM

    coffee_shop_sales

WHERE

    MONTH(transaction_date) = 5 -- Filter for May (month number 5)

GROUP BY

    CASE

        WHEN DAYOFWEEK(transaction_date) = 2 THEN 'Monday'

        WHEN DAYOFWEEK(transaction_date) = 3 THEN 'Tuesday'

        WHEN DAYOFWEEK(transaction_date) = 4 THEN 'Wednesday'

        WHEN DAYOFWEEK(transaction_date) = 5 THEN 'Thursday'

        WHEN DAYOFWEEK(transaction_date) = 6 THEN 'Friday'

        WHEN DAYOFWEEK(transaction_date) = 7 THEN 'Saturday'
```
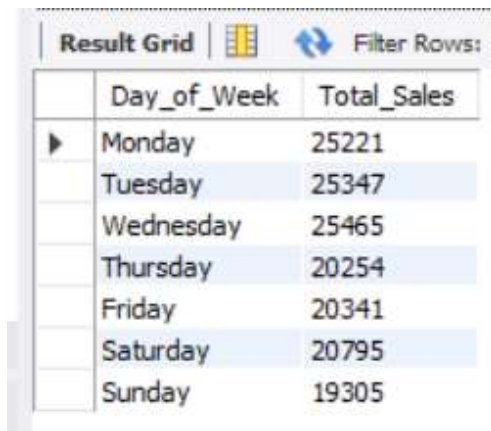
ELSE 'Sunday'

END;




**TO GET SALES FOR ALL HOURS FOR MONTH OF MAY**

SELECT

   HOUR(transaction_time) AS Hour_of_Day,

   ROUND(SUM(unit_price * transaction_qty)) AS Total_Sales

FROM

   coffee_shop_sales

WHERE

   MONTH(transaction_date) = 5 -- Filter for May (month number 5)

GROUP BY

   HOUR(transaction_time)

ORDER BY

   HOUR(transaction_time);

| Result Grid | Filter Rows: | |
|---|---|---|
| | Hour_of_Day | Total_Sales |
| ▶ | 6 | 4913 |
| | 7 | 14351 |
| | 8 | 18822 |
| | 9 | 19145 |
| | 10 | 19639 |
| | 11 | 10312 |
| | 12 | 8870 |
| | 13 | 9379 |
| | 14 | 9058 |
| | 15 | 9525 |
| | 16 | 9154 |
| | 17 | 8967 |
| | 18 | 7680 |
| | 19 | 6256 |
| | 20 | 656 |