

-- QUE 1- What day of the week is used for each week_date value?

```
select weekDate,dayname(weekDate) as weekdays  
from data_mart;
```

-- QUE 2- What range of week numbers are missing from the dataset?

```
WITH all_weeks AS (  
    SELECT week_number  
    FROM (SELECT 1 AS week_number UNION ALL  
          SELECT 2 UNION ALL  
          SELECT 3 UNION ALL  
          SELECT 4 UNION ALL  
          SELECT 5 UNION ALL  
          SELECT 6 UNION ALL  
          SELECT 7 UNION ALL  
          SELECT 8 UNION ALL  
          SELECT 9 UNION ALL  
          SELECT 10 UNION ALL  
          SELECT 11 UNION ALL  
          SELECT 12 UNION ALL  
          SELECT 13 UNION ALL  
          SELECT 14 UNION ALL  
          SELECT 15 UNION ALL  
          SELECT 16 UNION ALL  
          SELECT 17 UNION ALL  
          SELECT 18 UNION ALL  
          SELECT 19 UNION ALL  
          SELECT 20 UNION ALL  
          SELECT 21 UNION ALL  
          SELECT 22 UNION ALL  
          SELECT 23 UNION ALL  
          SELECT 24 UNION ALL  
          SELECT 25 UNION ALL  
          SELECT 26 UNION ALL  
          SELECT 27 UNION ALL  
          SELECT 28 UNION ALL  
          SELECT 29 UNION ALL  
          SELECT 30 UNION ALL  
          SELECT 31 UNION ALL  
          SELECT 32 UNION ALL  
          SELECT 33 UNION ALL  
          SELECT 34 UNION ALL  
          SELECT 35 UNION ALL  
          SELECT 36 UNION ALL  
          SELECT 37 UNION ALL  
          SELECT 38 UNION ALL
```

```

SELECT 39 UNION ALL
SELECT 40 UNION ALL
SELECT 41 UNION ALL
SELECT 42 UNION ALL
SELECT 43 UNION ALL
SELECT 44 UNION ALL
SELECT 45 UNION ALL
SELECT 46 UNION ALL
SELECT 47 UNION ALL
SELECT 48 UNION ALL
SELECT 49 UNION ALL
SELECT 50 UNION ALL
SELECT 51 UNION ALL
SELECT 52) AS weeks
)
SELECT week_number
FROM all_weeks
WHERE week_number NOT IN (SELECT DISTINCT week_number FROM data_mart);

```

-- QUE 3- How many total transactions were there for each year in the dataset?

```

select Distinct(calendar_year), Sum(transactions) as total_Trans
from data_mart
group by calendar_year
order by calendar_year ;

```

-- QUE 4- What is the total sales for each region for each month?

```

select
MONTHNAME(DATE(CONCAT('2023-', month_number, '-01'))) AS month_name,
Sum(sales) as total_Sales
from data_mart
group by month_name
order by total_Sales Desc;

```

-- QUE 5- What is the total count of transactions for each platform

```

select
platform,
Count(transactions) as Count_trans
from data_mart
group by platform;

```

-- QUE 6- What is the percentage of sales for Retail vs Shopify for each month?

```
select
platform,
SUM(sales) AS total_sales,
MONTHNAME(DATE(CONCAT('2023-', month_number, '-01'))) AS month_name,
(sum(sales) / (SELECT SUM(sales) FROM data_mart) * 100) AS sales_percentage
from data_mart
GROUP BY platform, month_number
ORDER BY month_number, platform;
```

-- QUE 7- What is the percentage of sales by demographic for each year in the dataset?

```
select
demographic,
calendar_year,
SUM(sales) AS total_sales,
Round((sum(sales) / (SELECT SUM(sales) FROM data_mart) * 100),2) AS
sales_percentage
from data_mart
GROUP BY demographic, calendar_year
ORDER BY demographic, calendar_year;
```

-- QUE 8- Which age_band and demographic values contribute the most to Retail sales?

```
with retail_sale as(
SELECT
    age_band,
    demographic,
    SUM(sales) AS total_sales
FROM
    data_mart
WHERE
    platform = 'Retail'
    GROUP BY
        age_band, demographic
)
SELECT
    age_band,
    demographic,
    total_sales
FROM
    retail_sale
WHERE
    total_sales = (SELECT MAX(total_sales) FROM retail_sale);
```

-- QUE 9- Can we use the avg_transaction column to find the average transaction size for each year for Retail vs Shopify?

```
SELECT
    YEAR(weekDate) AS year,
    platform,
    AVG( avg_transaction) AS avg_transaction_size
FROM
    data_mart
WHERE
    platform IN ('Retail', 'Shopify')
GROUP BY
    YEAR(weekDate), platform
ORDER BY
    year, platform;
```