use Commercial_Project

-- 1) Show Total Transactions, Total Profit, Profit Margin by Product_Brand

select p.product_brand, COUNT(t.transaction_date) AS number_of_transactions, ROUND(SUM(t.profit),0) AS
total_profit,
-- CAST(SUM(profit) / SUM(revenue) AS decimal(10,2)) * 100 AS profit_margin
CAST(SUM(t.profit) / SUM(t.quantity * p.product_retail_price) AS decimal(10,2)) * 100 AS profit_margin
from Transaction_Data t
inner join Products p on t.product_id = p.product_id
group by p.product_brand

-- Show the top 30 product brands, then sort descending by Total Transactions

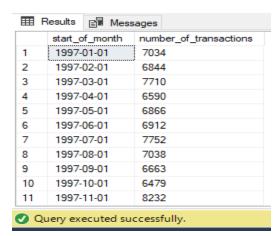
select TOP 30

p.product_brand, COUNT(t.transaction_date) AS number_of_transactions, ROUND(SUM(t.profit),0) AS total_profit,
-- CAST(SUM(profit) / SUM(revenue) AS decimal(10,2)) * 100 AS profit_margin
CAST(SUM(t.profit) / SUM(t.quantity * p.product_retail_price) AS decimal(10,2)) * 100 AS profit_margin
from Transaction_Data t
inner join Products p on t.product_id = p.product_id
group by p.product_brand
order by COUNT(t.transaction_date) DESC

⊞ Results					
	product_brand		number_of_transactions	total_profit	profit_margin
1	Hermanos		8071	33167.00	59.00
2	Tell Tale		7694	29926.00	58.00
3	Ebony		7685	29749.00	60.00
4	Tri-State		7438	29065.00	59.00
5	High Top		7153	28503.00	60.00
6	Nationeel		6499	27446.00	60.00
7	Fast		6188	24747.00	61.00
8	Fort West		6175	23951.00	60.00
9	Horati	0	6121	25589.00	58.00
10	Best C	Choice	6000	25901.00	61.00
11	Sunset		5856	20803.00	60.00

-- Show total transactions by start of month

select DATETRUNC(MONTH, c.date) AS start_of_month, COUNT(transaction_date) AS number_of_transactions from
Transaction_Data t
inner join calendar c on c.date = t.transaction_date
group by DATETRUNC(MONTH, c.date)



-- Show Total Transactions by store city and country

select COUNT(t.transaction_date) AS number_of_transactions, s.store_country, s.store_city from
Transaction_Data t
inner join Stores s on s.store_id = t.store_id

```
group by s.store_country, s.store_city
-- Show Total transactions by store country and store city
-- Window function OVER() clause
select CONCAT_WS(' ', c.first_name, c.last_name) AS customer_full_name, s.store_country, s.store_city,
t.transaction_date,
COUNT(t.transaction_date) OVER() AS overall_number_of_transactions,
COUNT(t.transaction_date) OVER(PARTITION BY s.store_country, s.store_city) AS
store_country_city_number_of_transactions
from Transaction_Data t
inner join Stores s on s.store_id = t.store_id
left join Customers c on c.customer_id = t.customer_id
  Results Messages
      customer full name
                      store country
                                 store city
                                           transaction date
                                                        overall number of transactions
                                                                                store country city number of transactions
      C Rutherford
                    Canada
                                           1998-01-05
                                                         269720
                                                                                 12770
                                  Vancouver
                                            1998-01-05
                                                         269720
                                                                                 12770
       A Smith
                      Canada
                                  Vancouver
                      Canada
                                  Vancouver
       M Lique
                      Canada
                                  Vancouver
                                            1998-01-05
                                                         269720
       C Batt
                                            1998-01-05
                                                         269720
                                                                                 12770
                                                                                 12770
       C Rutherford
                      Canada
                                  Vancouver
                                            1998-01-05
                                                         269720
       B McMenama
                      Canada
                                           1998-01-05
                                                         269720
                                                                                 12770
                                  Vancouver
       R Beret
                      Canada
                                  Vancouver
                                            1998-01-05
                                                         269720
                                                                                 12770
       K Cleary
                      Canada
                                  Vancouver
                                           1998-01-05
                                                         269720
                                                                                 12770
  10
       R Beret
                      Canada
                                  Vancouver
                                           1998-01-05
                                                         269720
                                                                                 12770
  11
       S Anderson
                      Canada
                                  Vancouver
                                           1998-01-05
                                                         269720
                                                                                 12770
-- Pull the weekly revenue trending. Only show data for 1998
select DATETRUNC(WEEK, c.Date) AS start_of_week, ROUND(SUM(t.quantity * p.product_retail_price),0) AS
total revenue
from Transaction_Data t
left join Calendar c on t.transaction date = c.Date
left join Products p on p.product_id = t.product_id
where DATEPART(YEAR, c.Date) = 1998
group by DATETRUNC(WEEK, c.Date)
order by DATETRUNC(WEEK, c.Date) ASC
  Results Messages
        start_of_week total_revenue
                       26575.00
        1998-01-04
  3
        1998-01-11
                       30621.00
        1998-01-18
                       20943.00
  5
         1998-01-25
                        11902.00
        1998-02-01
                       27514.00
        1998-02-08
                        27773.00
        1998-02-15
                       20022.00
   10
         1998-03-08
                       22096.00
   11
   12
         1998-03-15
                       25433.00

    Query executed successfully

-- Pull the Top Customer in terms of Total Revenue and Total Orders - Optional Question
     -- Pull the Top Customer in terms of Total Revenue and Total Transactions - Optional Question
   select TOP 1
     t.customer_id, COUNT(t.transaction_date) AS number_of_transactions, SUM(t.quantity * p.product_retail_price) AS total_revenue
     from Transaction_Data t
     inner join Products p on p.product_id = t.product_id
     group by t.customer_id
order by total_revenue DESC
 Results Messages
     customer_id number_of_transactions total_revenue
              290
```

5295

2235 43