Mobile Manufacturer Data Queries with Results

1. List all the states in which we have customers who have bought cellphones from 2005 till today.

```
SELECT LC.State

FROM FACT_TRANSACTIONS TR

LEFT JOIN DIM_DATE DT ON TR.Date= DT.DATE

LEFT JOIN DIM_LOCATION LC ON TR.IDLocation= LC.IDLocation

WHERE DT.YEAR > 2005

GROUP BY LC.State
```

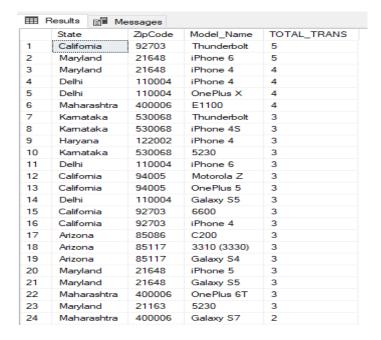


2. Which state in the US is buying the most 'Samsung' cell phones?

```
SELECT TOP 1 T1.State, SUM(T2.IDModel) AS TOTAL_SALE FROM
(SELECT TR.IDModel, lc.State
FROM FACT_TRANSACTIONS TR
LEFT JOIN DIM_LOCATION LC ON TR.IDLocation= LC.IDLocation
WHERE 1c.Country = 'US'
) T1
JOIN (
SELECT ML.IDModel, MF.Manufacturer_Name FROM DIM_MODEL ML
LEFT JOIN DIM MANUFACTURER MF ON ML.IDManufacturer = MF.IDManufacturer
WHERE MF.Manufacturer_Name = 'Samsung'
) T2 ON
T1.IDModel = T2.IDModel
GROUP BY T1.State
ORDER BY TOTAL_SALE DESC
 Results 📳 Messages
      State
             TOTAL SALE
 1
      Arizona
             2176
```

3. Show the number of transactions for each model per zip code per state.

```
SELECT LC.State, LC.ZipCode, ML.Model_Name, COUNT(FT.IDCustomer) AS TOTAL_TRANS
FROM FACT_TRANSACTIONS FT
LEFT JOIN DIM_LOCATION LC ON FT.IDLocation = LC.IDLocation
LEFT JOIN DIM_MODEL ML ON FT.IDModel = ML.IDModel
GROUP BY LC.State, LC.ZipCode, ML.Model_Name
```



4. Show the cheapest cellphone along with its price.

```
SELECT TOP 1 DM.Model_Name, FT.TotalPrice
FROM FACT_TRANSACTIONS FT
JOIN DIM_MODEL DM ON FT.IDModel = DM.IDModel
ORDER BY FT.TotalPrice;
```



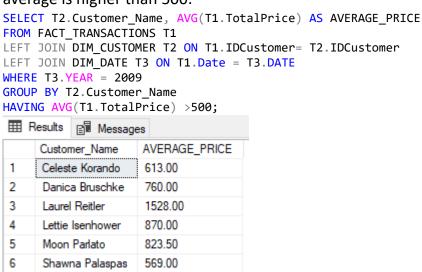
5. Find out the average price for each model in the top 5 manufacturers in terms of sales quantity and order by average price.

```
WITH Top5Manufacturers AS (
    SELECT TOP 5 DMF.IDManufacturer, SUM(FT.Quantity) as Sales
    FROM Fact_Transactions FT
    JOIN Dim_Model DM ON FT.IDModel = DM.IDModel
    JOIN Dim_Manufacturer DMF ON DM.IDManufacturer = DMF.IDManufacturer
    GROUP BY DMF.IDManufacturer
    ORDER BY Sales DESC
)

SELECT Dim_Model.Model_Name, AVG(Fact_Transactions.TotalPrice) as Average_Price
FROM Fact_Transactions
JOIN Dim_Model ON FACT_TRANSACTIONS.IDModel = Dim_Model.IDModel
WHERE Dim_Model.IDManufacturer IN (SELECT IDManufacturer FROM Top5Manufacturers)
GROUP BY Dim_Model.Model_Name
ORDER BY Average_Price ASC;
```



6. List the names of the customers and the average amount spent in 2009, where the average is higher than 500.



7. List if there is any model that was in the top 5 in terms of quantity, simultaneously in 2008, 2009 and 2010.

```
WITH Top5Models2008 AS (
    SELECT TOP 5 Dim_Model.Model_Name, SUM(Fact_Transactions.Quantity) as Sales
    FROM Fact_Transactions
    JOIN Dim_Model ON Fact_Transactions.IDModel = Dim_Model.IDModel
    WHERE Fact_Transactions.Date >= '2008-01-01' AND Fact_Transactions.Date < '2009-01-
01'
    GROUP BY Dim_Model.Model_Name
    ORDER BY Sales DESC
),
Top5Models2009 AS (
    SELECT TOP 5 Dim_Model.Model_Name, SUM(Fact_Transactions.Quantity) as Sales
    FROM Fact_Transactions
    JOIN Dim_Model ON Fact_Transactions.IDModel = Dim_Model.IDModel</pre>
```

```
WHERE Fact_Transactions.Date >= '2009-01-01' AND Fact_Transactions.Date < '2010-01-</pre>
01
  GROUP BY Dim Model Model Name
  ORDER BY Sales DESC
Top5Models2010 AS (
  SELECT TOP 5 Dim_Model.Model_Name, SUM(Fact_Transactions.Quantity) as Sales
  FROM Fact Transactions
  JOIN Dim Model ON Fact Transactions.IDModel = Dim Model.IDModel
 WHERE Fact_Transactions.Date >= '2010-01' AND Fact_Transactions.Date < '2011-01-
01'
  GROUP BY Dim_Model_Model_Name
  ORDER BY Sales DESC
SELECT Model_Name FROM Top5Models2008
INTERSECT
SELECT Model_Name FROM Top5Models2009
INTERSECT
SELECT Model_Name FROM Top5Models2010;
 Model Name
 1
      Droid Bionic
```

8. Show the manufacturer with the 2nd top sales in the year of 2009 and the manufacturer with the 2nd top sales in the year of 2010.

```
WITH Sales2009 AS (
  SELECT Dim Manufacturer Manufacturer Name, SUM(Fact Transactions Quantity) as
Total Sales
  FROM Fact_Transactions
  JOIN Dim_Model ON Fact_Transactions.IDModel = Dim_Model.IDModel
  JOIN Dim_Manufacturer ON Dim_Model.IDManufacturer = Dim_Manufacturer.IDManufacturer
  WHERE Fact_Transactions.Date >= '2009-01-01' AND Fact_Transactions.Date < '2010-01-</pre>
01'
  GROUP BY Dim_Manufacturer.Manufacturer_Name
Sales2010 AS (
  SELECT DIM_MANUFACTURER.Manufacturer_Name, SUM(Fact_Transactions.Quantity) as
Total_Sales
  FROM Fact_Transactions
  JOIN Dim_Model ON Fact_Transactions.IDModel = Dim_Model.IDModel
  JOIN Dim_Manufacturer ON Dim_Model.IDManufacturer = Dim_Manufacturer.IDManufacturer
  WHERE Fact_Transactions.Date >= '2010-01-01' AND Fact_Transactions.Date < '2011-01-</pre>
01'
  GROUP BY Dim_Manufacturer.Manufacturer_Name
SELECT Manufacturer_Name, '2009' AS Year FROM (
  SELECT Manufacturer_Name, Total_Sales,
    ROW_NUMBER() OVER (ORDER BY Total_Sales DESC) as RowNum
  FROM Sales2009) AS SubQuery
WHERE RowNum = 2
UNION ALL
SELECT Manufacturer_Name, '2010' AS Year FROM (
  SELECT Manufacturer_Name, Total_Sales,
    ROW_NUMBER() OVER (ORDER BY Total_Sales DESC) as RowNum
  FROM Sales2010) AS SubQuery
WHERE RowNum = 2;
Results Messages
     Manufacturer Name
                   Year
     Motorola
                   2009
 2
     Motorola
                   2010
```

9. Show the manufacturers that sold cellphones in 2010 but did not in 2009.

```
SELECT Dim Manufacturer Manufacturer Name
FROM Dim Manufacturer
WHERE Dim Manufacturer.IDManufacturer IN (
    SELECT Dim Model.IDManufacturer
    FROM Fact Transactions
    JOIN Dim Model ON Fact Transactions.IDModel = Dim Model.IDModel
    WHERE Fact_Transactions.Date >= '2010-01-01' AND Fact_Transactions.Date < '2011-</pre>
01-01'
  AND Dim Manufacturer. IDManufacturer NOT IN (
    SELECT Dim Model.IDManufacturer
    FROM Fact Transactions
    JOIN Dim Model ON Fact Transactions.IDModel = Dim Model.IDModel
    WHERE Fact_Transactions.Date >= '2009-01-01' AND Fact_Transactions.Date < '2010-</pre>
01-01'
  );
 Results 📳 Messages
      Manufacturer_Name
      HTC
 1
```

10. Find the top 20 customers and their average spend, and average quantity by each year. Also, find the percentage of change in their spends.

```
WITH Customer Spend AS (
  SELECT Dim_Customer.IDCustomer, Dim_Customer.Customer_Name,
    YEAR(Fact_Transactions.Date) AS Years,
       AVG(Fact_Transactions.TotalPrice) AS Avg_Spend,
    AVG(Fact_Transactions.Quantity) AS Avg_Quantity
  FROM Fact_Transactions
  JOIN Dim_Customer ON Fact_Transactions.IDCustomer = Dim_Customer.IDCustomer
  GROUP BY Dim_Customer.IDCustomer, Dim_Customer.Customer_Name,
YEAR(Fact Transactions.Date)
SELECT TOP 20 IDCustomer, Customer_Name, Years, Avg_Spend, Avg_Quantity,
  LAG(Avg Spend, 1, 0) OVER (PARTITION BY IDCustomer ORDER BY Years) AS
Prev Year Spend,
  CASE WHEN LAG(Avg Spend, 1, 0) OVER (PARTITION BY IDCustomer ORDER BY Years) = 0
THEN 0
          ELSE (Avg_Spend - LAG(Avg_Spend, 1, 0) OVER (PARTITION BY IDCustomer ORDER
BY Years)) /
  LAG(Avg Spend, 1, 0) OVER (PARTITION BY IDCustomer ORDER BY Years) * 100
  END AS Spend_Change_Percentage
FROM Customer Spend
ORDER BY Avg_Spend DESC;
```

	IDCustomer	Customer_Name	Years	Avg_Spend	Avg_Quantity	Prev_Year_Spend	Spend_Change_Percentage
1	10007	Laurel Reitler	2009	1528.00	4	557.00	174.32
2	10003	Bobbye Rhym	2007	1106.00	2	474.00	133.33
3	10014	Dominque Dickerson	2007	920.00	2	406.00	126.60
4	10015	Lettie Isenhower	2009	870.00	2	150.00	480.00
5	10025	Elvera Benimadho	2003	858.00	3	0.00	0.00
6	10020	Tyra Shields	2010	832.00	2	335.50	147.98
7	10009	Viva Toelkes	2005	830.00	2	151.00	449.66
8	10006	Moon Parlato	2009	823.50	2	256.50	221.05
9	10023	Danica Bruschke	2009	760.00	2	392.50	93.63
10	10018	Lai Gato	2005	689.50	1	169.00	307.98
11	10006	Moon Parlato	2003	667.00	1	0.00	0.00
12	10009	Viva Toelkes	2010	665.00	1	67.00	892.53
13	10030	Arlene Klusman	2004	665.00	1	0.00	0.00
14	10036	Celeste Korando	2009	613.00	1	401.6666	52.61
15	10001	Kallie Blackwood	2006	583.00	1	84.00	594.04
16	10047	Shawna Palaspas	2009	569.00	1	381.00	49.34
17	10007	Laurel Reitler	2008	557.00	1	288.00	93.40
18	10037	Twana Felger	2004	557.00	1	374.00	48.93
19	10012	Timothy Mulqueen	2006	556.00	1	0.00	0.00
20	10026	Cama Vanheusen	2008	556.00	1	285.00	95.08