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Homework 5: Data Warehouse Lab

1. The salesperson who produced the most total revenue during 2012 was Julian Brand with $2885.50.

```
SELECT S.SalesPersonName, SUM(P.Quantity * P.SalesPrice) AS Total_Revenue, D.YEAR AS annual
    FROM dim_salesperson S
    JOIN fact_productsales P ON S.SalesPersonID=P.SalesPersonID
    JOIN dim_date D ON P.SalesDateKey=D.DateKey
    GROUP BY SalesPersonName, annual
    HAVING annual = 2012
    ORDER BY Total_Revenue DESC LIMIT 1;
```

SalesPersonName	Total_Revenue	annual
Julian Brand	2885.50	2012

2. The customer with the highest revenue increase between 2012 and 2013 was Harrison Ford with $260.50.

```
SELECT C.CustomerName, SUM(P.Quantity * P.SalesPrice) AS Total_Revenue, D.YEAR AS annual
    FROM dim_customer C
    JOIN fact_productsales P ON C.CustomerID=P.CustomerID
    JOIN dim_date D ON P.SalesDateKey=D.DateKey
    GROUP BY CustomerName, annual
    HAVING annual BETWEEN 2012 AND 2013;
```

CustomerName	Total_Revenue	annual
Harrison Ford	1162.50	2012
Harrison Ford	1423.00	2013
Melinda Gates	1898.00	2012
Melinda Gates	361.00	2013
Elon Musk	1565.50	2012
Elon Musk	342.00	2013
Aldous Huxley	4970.00	2012
Aldous Huxley	852.00	2013
Linda Ronstadt	1153.50	2012

3. For 2010, the rank for total revenue was Store 1 Boulder, Store 2 Lyons, then Store 3 Berthoud.

   For 2011 the rank for total revenue was Store 1 Boulder, Store 2 Lyons, then Store 3 Berthoud.

   For 2012 the rank for total revenue was Store 1 Boulder, Store 2 Lyons, then Store 3 Berthoud.

   For 2013 the rank for total revenue was Store 1 Boulder, Store 2 Lyons, then Store 3 Berthoud.

   For 2015 the rank for total revenue was Store 1 Boulder, Store 3 Berthoud, then Store 2 Lyons.

   For 2016 the rank for total revenue was Store 1 Boulder, Store 2 Lyons, then Store 3 Berthoud.

   For 2017 the rank for total revenue was Store 1 Boulder, Store 3 Berthoud, then Store 2 Lyons.

```
SELECT S.StoreID, SUM(P.Quantity * P.SalesPrice) AS Total_Revenue, D.YEAR AS annual
    FROM dim_store S
    JOIN fact_productsales P ON S.StoreID=P.StoreID
    JOIN dim_date D ON P.SalesDateKey=D.DateKey
    GROUP BY StoreID, annual
    ORDER BY annual, Total Revenue DESC;
```

StoreID	Total_Revenue	annual
1	7286.00	2012
2	1898.00	2012
3	1565.50	2012
1	2275.00	2013
2	361.00	2013
3	342.00	2013
1	4608.00	2015
3	1112.50	2015
2	1062.00	2015
1	6519.00	2016
2	2339.00	2016
3	1711.00	2016
1	3746.00	2017
3	783.50	2017
2	437.50	2017

4. The product with the highest profit in 2015 was Jasmine Rice 5kg with $102.00.

```
SELECT P.ProductName, SUM((P.ProductSalesPrice - P.ProductActualCost) * PS.Quantity) AS Profit, D.YEAR AS annual
    FROM dim_product P
    JOIN fact_productsales PS ON P.ProductKey=PS.ProductID
    JOIN dim_date D ON PS.SalesDateKey=D.DateKey
    GROUP BY ProductName, annual
    HAVING annual = 2015
    ORDER BY Profit DESC LIMIT 1;
```

ProductName	Profit	annual
Jasmine Rice 5kg	102.00	2015

5. The calendar quarter with the highest revenue for the Boulder store was quarter number 3 in 2016 with $2259.50.

```
SELECT S.StoreName, SUM(P.Quantity * P.SalesPrice) AS Total_Revenue, D.QUARTER AS quart, D.YEAR AS annual
    FROM dim_store S
    JOIN fact_productsales P ON P.StoreID=S.StoreID
    JOIN dim_date D ON P.SalesDateKey=D.DateKey
    GROUP BY StoreName, quart, annual
    HAVING StoreName = 'ValueMart Boulder' AND annual = 2016
    ORDER BY Total_Revenue DESC LIMIT 1;
```

StoreName	Total_Revenue	quart	annual
ValueMart Boulder	2259.50	3	2016