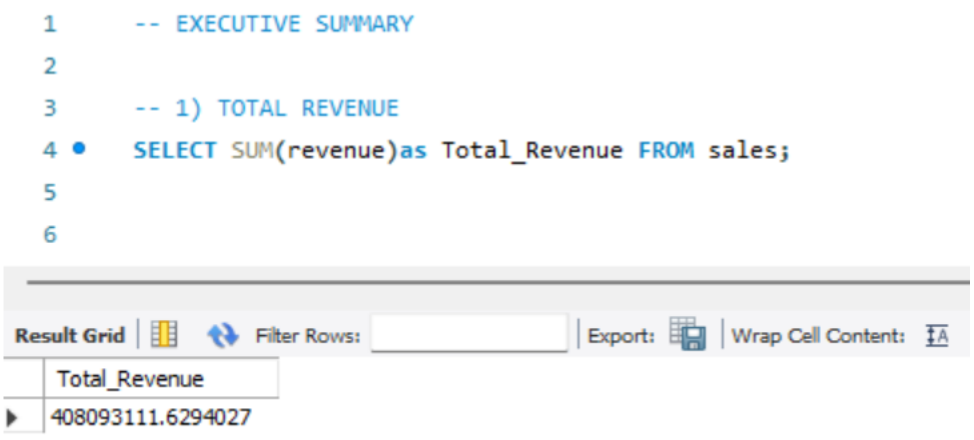
SQL QUERIES & OUTPUTS

-- EXECUTIVE SUMMARY

-- 1) TOTAL REVENUE

SELECT SUM(revenue)as Total_Revenue FROM sales;

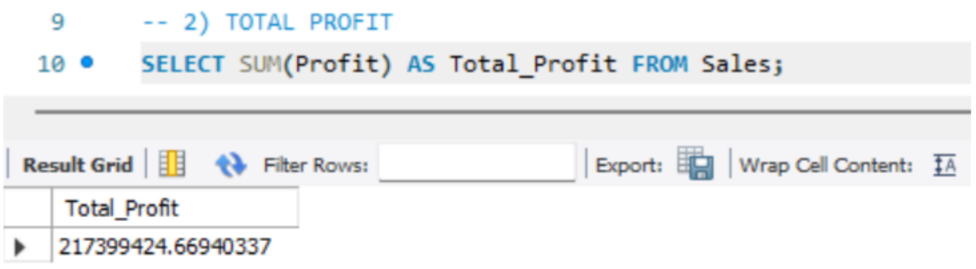


```
-- EXECUTIVE SUMMARY

-- 1) TOTAL REVENUE
SELECT SUM(revenue)as Total_Revenue FROM sales;
```

Total_Revenue
408093111.6294027

-- 2) TOTAL PROFIT

SELECT SUM(Profit) AS Total_Profit FROM Sales;

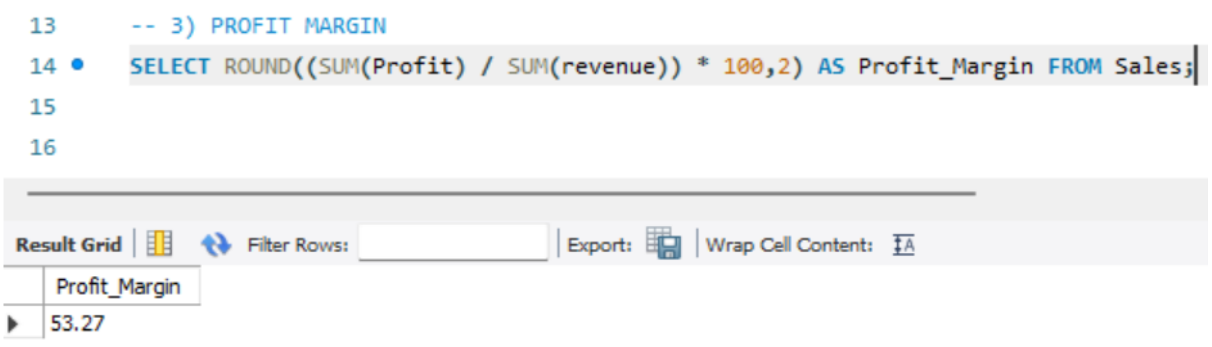


```
-- 2) TOTAL PROFIT
SELECT SUM(Profit) AS Total_Profit FROM Sales;
```

Total_Profit
217399424.66940337

-- 3) PROFIT MARGIN

SELECT ROUND((SUM(Profit) / SUM(revenue)) * 100,2) AS Profit_Margin FROM Sales;

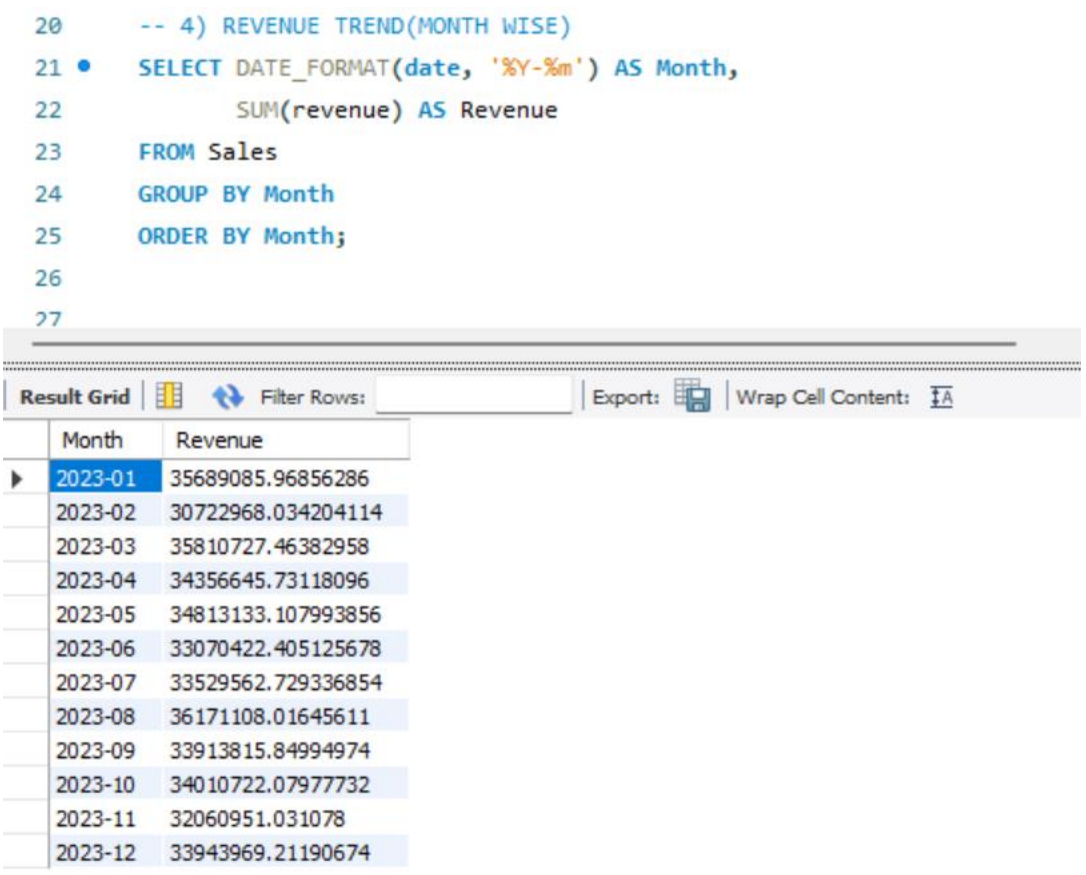


```
-- 3) PROFIT MARGIN
SELECT ROUND((SUM(Profit) / SUM(revenue)) * 100,2) AS Profit_Margin FROM Sales;
```

	Profit_Margin
▶	53.27

-- 4) REVENUE TREND(MONTH WISE)

```
SELECT DATE_FORMAT(date, '%Y-%m') AS Month,

      SUM(revenue) AS Revenue

FROM Sales

GROUP BY Month

ORDER BY Month;
```



```
-- 4) REVENUE TREND(MONTH WISE)
SELECT DATE_FORMAT(date, '%Y-%m') AS Month,
       SUM(revenue) AS Revenue
FROM Sales
GROUP BY Month
ORDER BY Month;
```

	Month	Revenue
▶	2023-01	35689085.96856286
	2023-02	30722968.034204114
	2023-03	35810727.46382958
	2023-04	34356645.73118096
	2023-05	34813133.107993856
	2023-06	33070422.405125678
	2023-07	33529562.729336854
	2023-08	36171108.01645611
	2023-09	33913815.84994974
	2023-10	34010722.07977732
	2023-11	32060951.031078
	2023-12	33943969.21190674

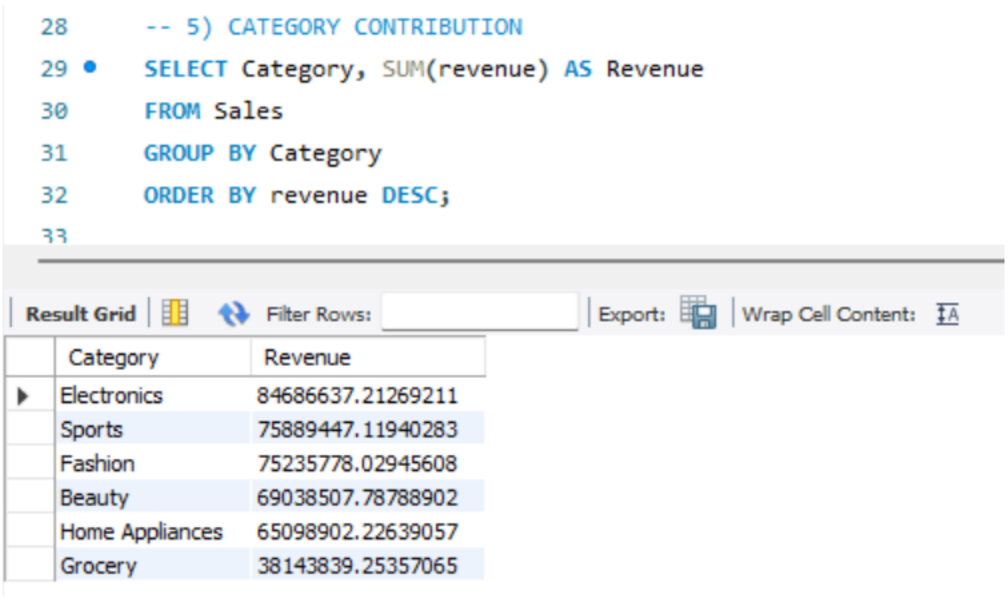
-- 5) CATEGORY CONTRIBUTION

SELECT Category, SUM(revenue) AS Revenue

FROM Sales

GROUP BY Category

ORDER BY revenue DESC;



```
-- 5) CATEGORY CONTRIBUTION
SELECT Category, SUM(revenue) AS Revenue
FROM Sales
GROUP BY Category
ORDER BY revenue DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Category	Revenue
Electronics	84686637.21269211
Sports	75889447.11940283
Fashion	75235778.02945608
Beauty	69038507.78788902
Home Appliances	65098902.22639057
Grocery	38143839.25357065

-- 6) TOP 10 PRODUCTS

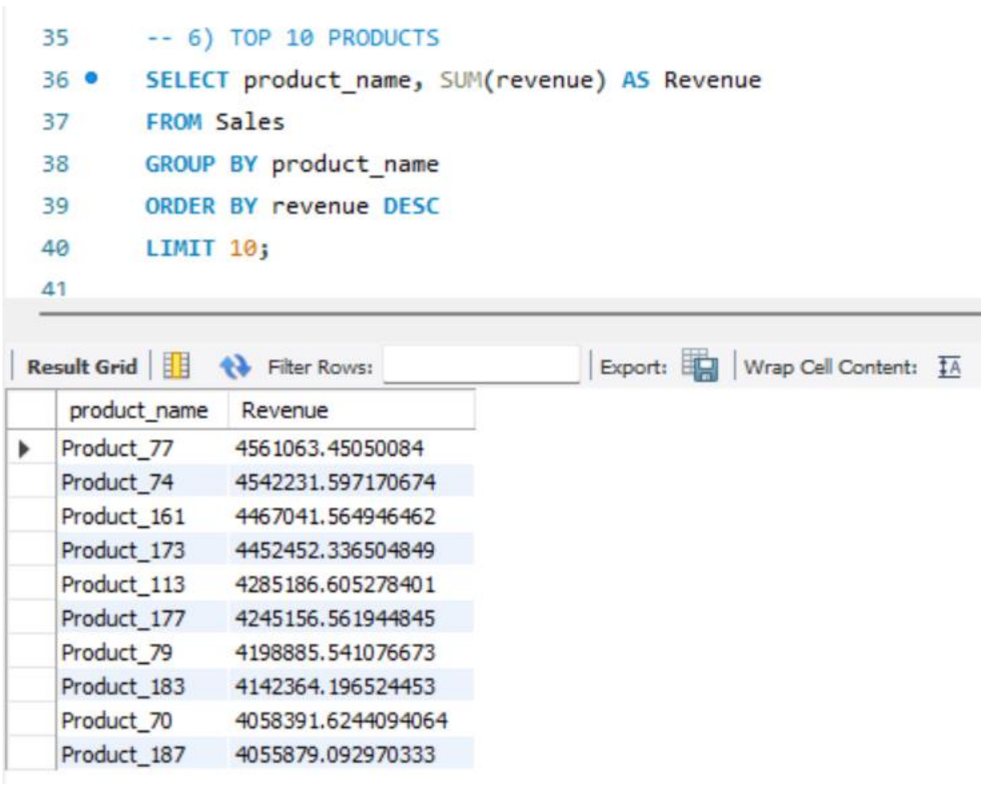
SELECT product_name, SUM(revenue) AS Revenue

FROM Sales

GROUP BY product_name

ORDER BY revenue DESC

LIMIT 10;



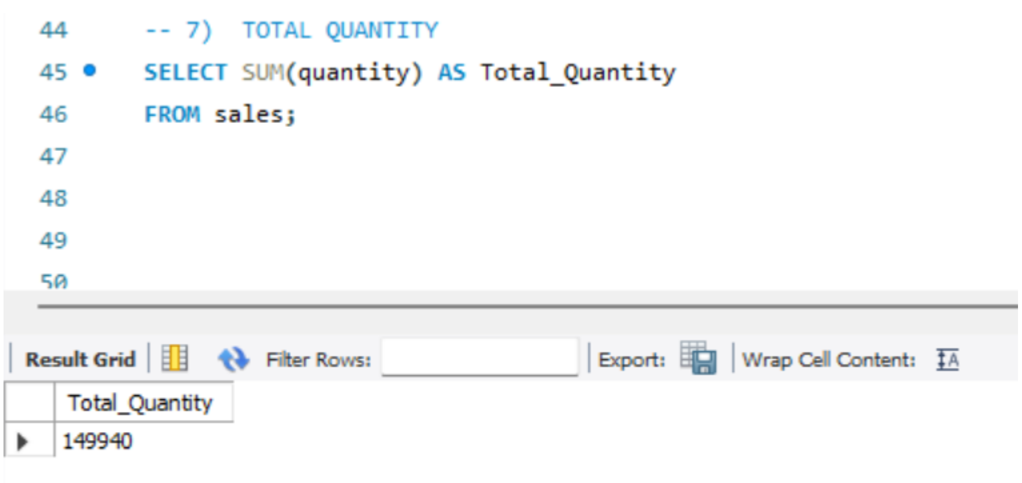
```
-- 6) TOP 10 PRODUCTS
SELECT product_name, SUM(revenue) AS Revenue
FROM Sales
GROUP BY product_name
ORDER BY revenue DESC
LIMIT 10;
```

product_name	Revenue
Product_77	4561063.45050084
Product_74	4542231.597170674
Product_161	4467041.564946462
Product_173	4452452.336504849
Product_113	4285186.605278401
Product_177	4245156.561944845
Product_79	4198885.541076673
Product_183	4142364.196524453
Product_70	4058391.6244094064
Product_187	4055879.092970333

-- 7) TOTAL QUANTITY

SELECT SUM(quantity) AS Total_Quantity

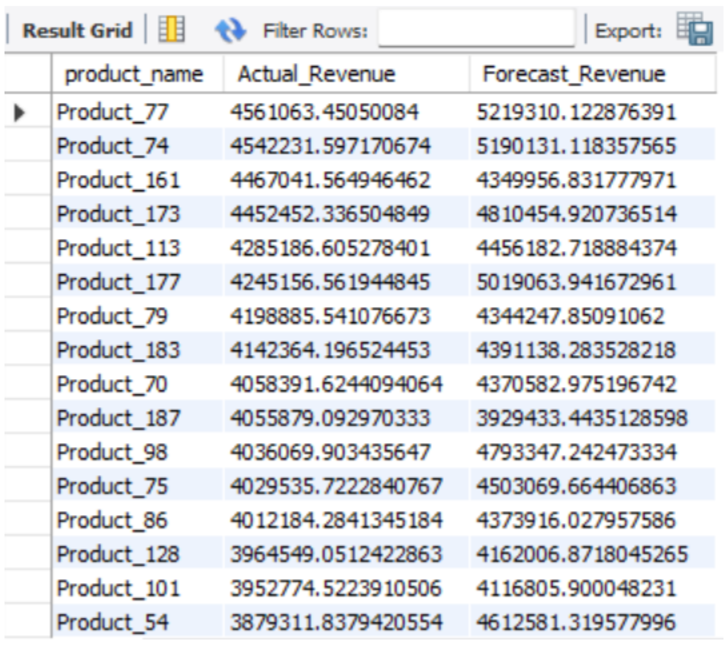
FROM sales;



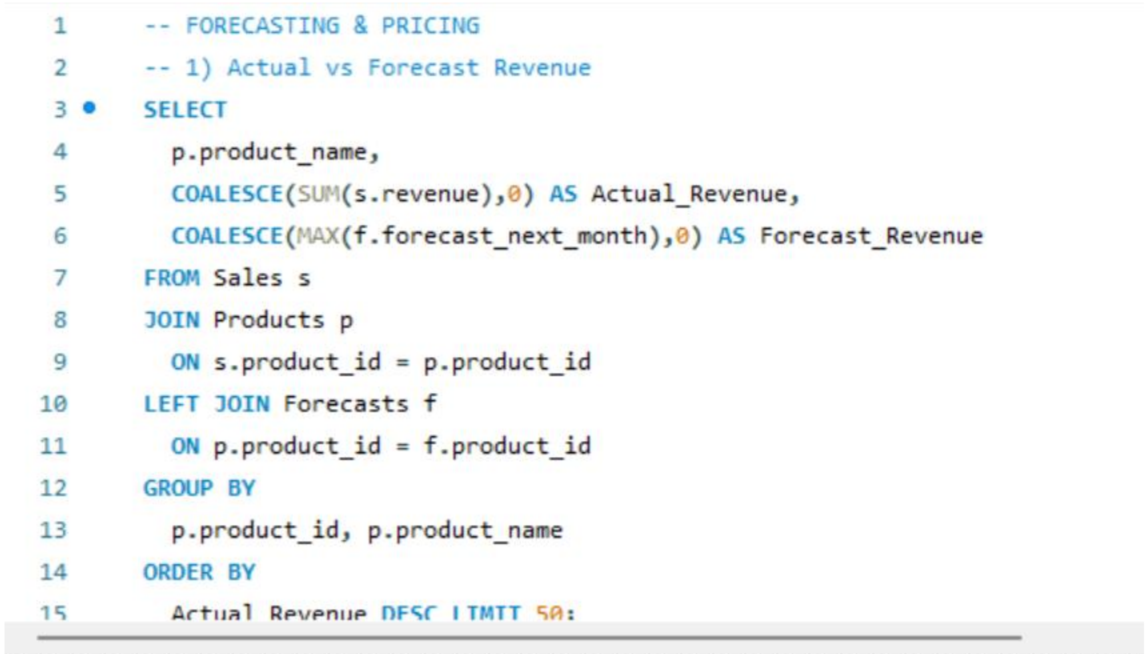
```
-- 7)  TOTAL QUANTITY
SELECT SUM(quantity) AS Total_Quantity
FROM sales;
```

Total_Quantity
149940

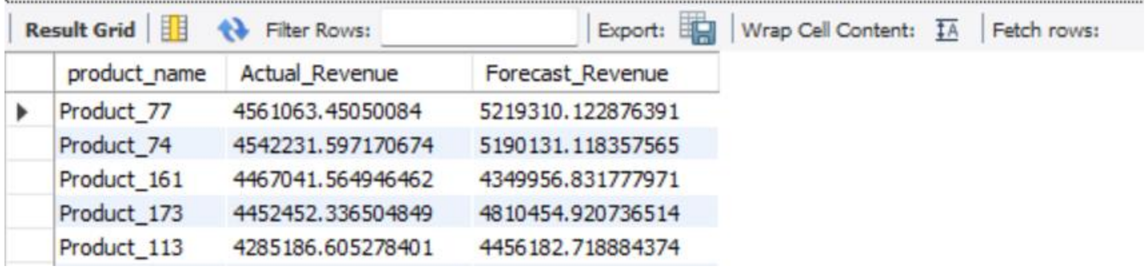
```
-- FORECASTING & PRICING

-- 1) Actual vs Forecast Revenue

SELECT

  p.product_name,

  COALESCE(SUM(s.revenue),0) AS Actual_Revenue,

  COALESCE(MAX(f.forecast_next_month),0) AS Forecast_Revenue

FROM Sales s

JOIN Products p

  ON s.product_id = p.product_id

LEFT JOIN Forecasts f

  ON p.product_id = f.product_id

GROUP BY

  p.product_id, p.product_name

ORDER BY

  Actual_Revenue DESC LIMIT 50;
```



product_name	Actual_Revenue	Forecast_Revenue
Product_77	4561063.45050084	5219310.122876391
Product_74	4542231.597170674	5190131.118357565
Product_161	4467041.564946462	4349956.831777971
Product_173	4452452.336504849	4810454.920736514
Product_113	4285186.605278401	4456182.718884374
Product_177	4245156.561944845	5019063.941672961
Product_79	4198885.541076673	4344247.85091062
Product_183	4142364.196524453	4391138.283528218
Product_70	4058391.6244094064	4370582.975196742
Product_187	4055879.092970333	3929433.4435128598
Product_98	4036069.903435647	4793347.242473334
Product_75	4029535.7222840767	4503069.664406863
Product_86	4012184.2841345184	4373916.027957586
Product_128	3964549.0512422863	4162006.8718045265
Product_101	3952774.5223910506	4116805.900048231
Product_54	3879311.8379420554	4612581.319577996

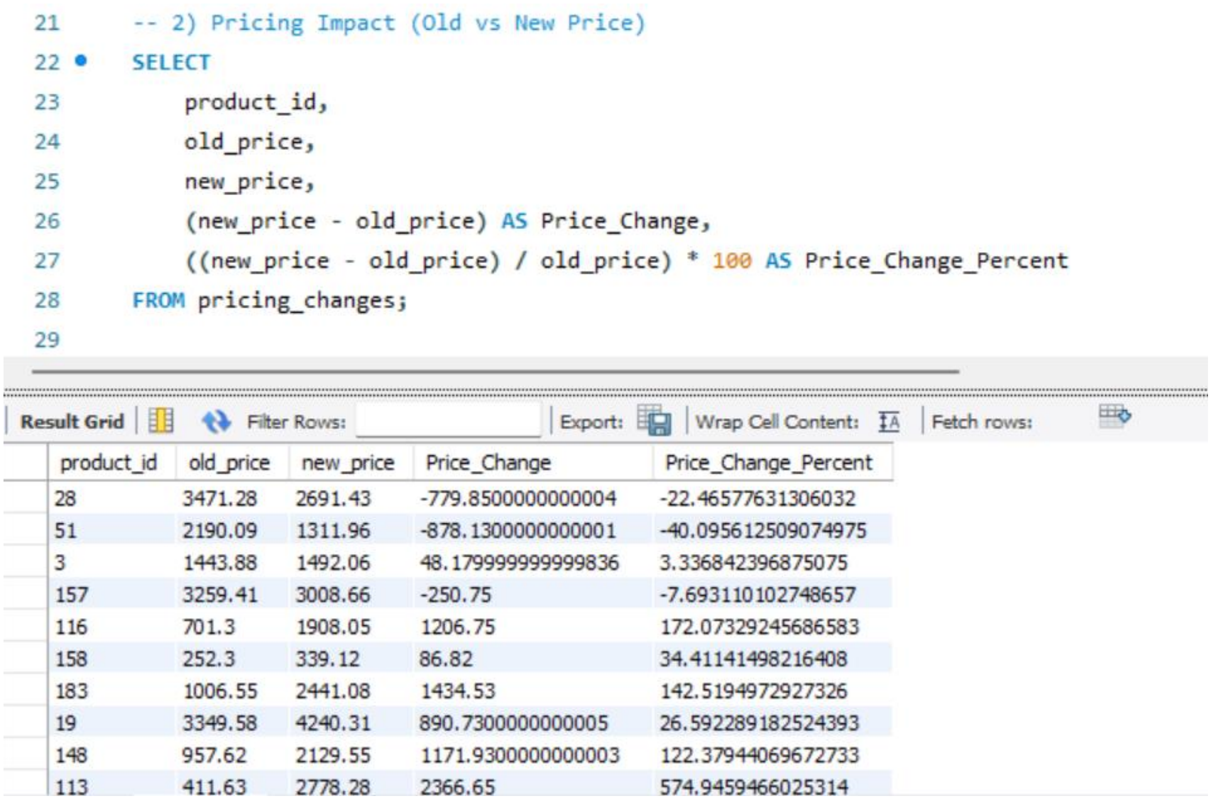


```sql
-- FORECASTING & PRICING
-- 1) Actual vs Forecast Revenue
SELECT
  p.product_name,
  COALESCE(SUM(s.revenue),0) AS Actual_Revenue,
  COALESCE(MAX(f.forecast_next_month),0) AS Forecast_Revenue
FROM Sales s
JOIN Products p
  ON s.product_id = p.product_id
LEFT JOIN Forecasts f
  ON p.product_id = f.product_id
GROUP BY
  p.product_id, p.product_name
ORDER BY
  Actual_Revenue DESC LIMIT 50;
```



product_name	Actual_Revenue	Forecast_Revenue
Product_77	4561063.45050084	5219310.122876391
Product_74	4542231.597170674	5190131.118357565
Product_161	4467041.564946462	4349956.831777971
Product_173	4452452.336504849	4810454.920736514
Product_113	4285186.605278401	4456182.718884374

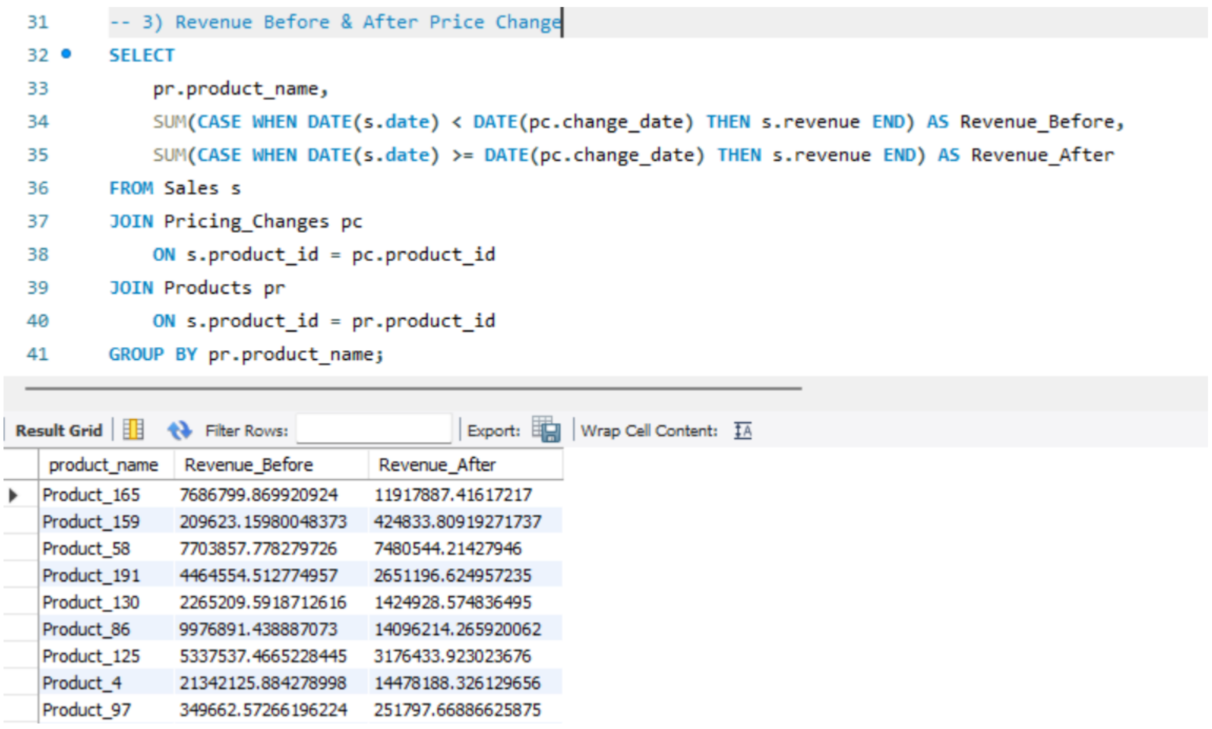
```
-- 2) Pricing Impact (Old vs New Price)

SELECT

    product_id,

    old_price,

    new_price,

    (new_price - old_price) AS Price_Change,

    ((new_price - old_price) / old_price) * 100 AS Price_Change_Percent

FROM pricing_changes;
```



```
-- 2) Pricing Impact (Old vs New Price)
SELECT
    product_id,
    old_price,
    new_price,
    (new_price - old_price) AS Price_Change,
    ((new_price - old_price) / old_price) * 100 AS Price_Change_Percent
FROM pricing_changes;
```

product_id	old_price	new_price	Price_Change	Price_Change_Percent
28	3471.28	2691.43	-779.8500000000004	-22.46577631306032
51	2190.09	1311.96	-878.1300000000001	-40.095612509074975
3	1443.88	1492.06	48.179999999999836	3.336842396875075
157	3259.41	3008.66	-250.75	-7.69311010274865 7
116	701.3	1908.05	1206.75	172.07329245686583
158	252.3	339.12	86.82	34.41141498216408
183	1006.55	2441.08	1434.53	142.5194972927326
19	3349.58	4240.31	890.7300000000005	26.592289182524393
148	957.62	2129.55	1171.9300000000003	122.37944069672733
113	411.63	2778.28	2366.65	574.9459466025314

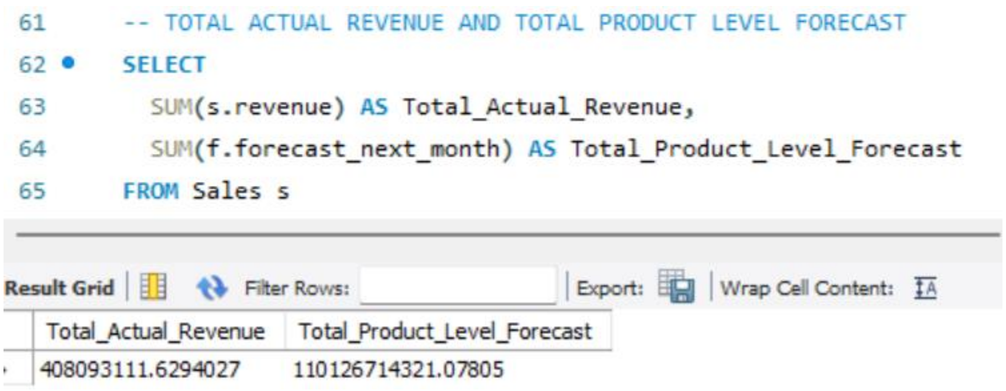
```
-- 3) Revenue Before & After Price Change

SELECT

    pr.product_name,

    SUM(CASE WHEN DATE(s.date) < DATE(pc.change_date) THEN s.revenue END) AS
Revenue_Before,
  SUM(CASE WHEN DATE(s.date) >= DATE(pc.change_date) THEN s.revenue END) AS Revenue_After

FROM Sales s

JOIN Pricing_Changes pc

  ON s.product_id = pc.product_id

JOIN Products pr

  ON s.product_id = pr.product_id

GROUP BY pr.product_name;
```



```
-- 3) Revenue Before & After Price Change
SELECT
    pr.product_name,
    SUM(CASE WHEN DATE(s.date) < DATE(pc.change_date) THEN s.revenue END) AS Revenue_Before,
    SUM(CASE WHEN DATE(s.date) >= DATE(pc.change_date) THEN s.revenue END) AS Revenue_After
FROM Sales s
JOIN Pricing_Changes pc
    ON s.product_id = pc.product_id
JOIN Products pr
    ON s.product_id = pr.product_id
GROUP BY pr.product_name;
```

product_name	Revenue_Before	Revenue_After
Product_165	7686799.869920924	11917887.41617217
Product_159	209623.15980048373	424833.80919271737
Product_58	7703857.778279726	7480544.21427946
Product_191	4464554.512774957	2651196.624957235
Product_130	2265209.5918712616	1424928.574836495
Product_86	9976891.438887073	14096214.265920062
Product_125	5337537.4665228445	3176433.923023676
Product_4	21342125.884278998	14478188.326129656
Product_97	349662.57266196224	251797.66886625875

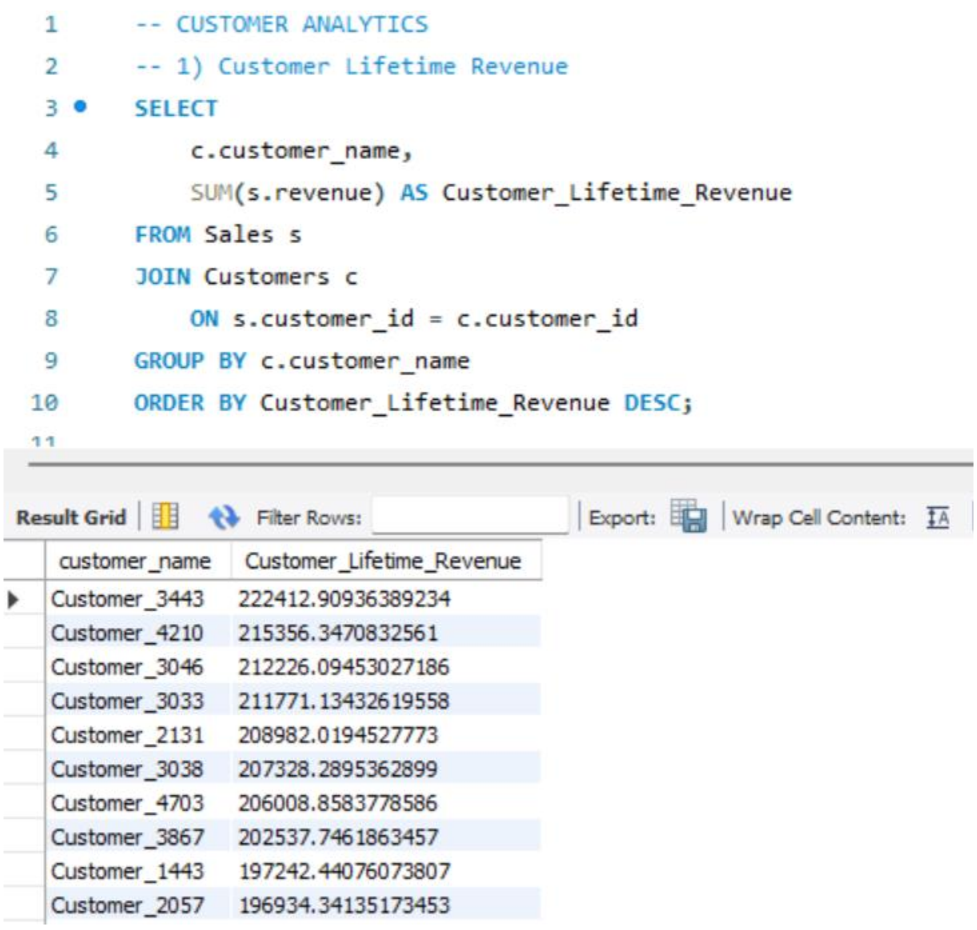
```
-- TOTAL ACTUAL REVENUE AND TOTAL PRODUCT LEVEL FORECAST

SELECT

 SUM(s.revenue) AS Total_Actual_Revenue,

 SUM(f.forecast_next_month) AS Total_Product_Level_Forecast

FROM Sales s

LEFT JOIN Forecasts f

 ON s.product_id = f.product_id;
```



```
-- TOTAL ACTUAL REVENUE AND TOTAL PRODUCT LEVEL FORECAST
SELECT
  SUM(s.revenue) AS Total_Actual_Revenue,
  SUM(f.forecast_next_month) AS Total_Product_Level_Forecast
FROM Sales s
```

```
Total_Actual_Revenue    Total_Product_Level_Forecast
408093111.6294027       110126714321.07805
```

```
-- CUSTOMER ANALYTICS

-- 1) Customer Lifetime Revenue

SELECT

   c.customer_name,

   SUM(s.revenue) AS Customer_Lifetime_Revenue

FROM Sales s

JOIN Customers c

   ON s.customer_id = c.customer_id

GROUP BY c.customer_name

ORDER BY Customer_Lifetime_Revenue DESC;
```

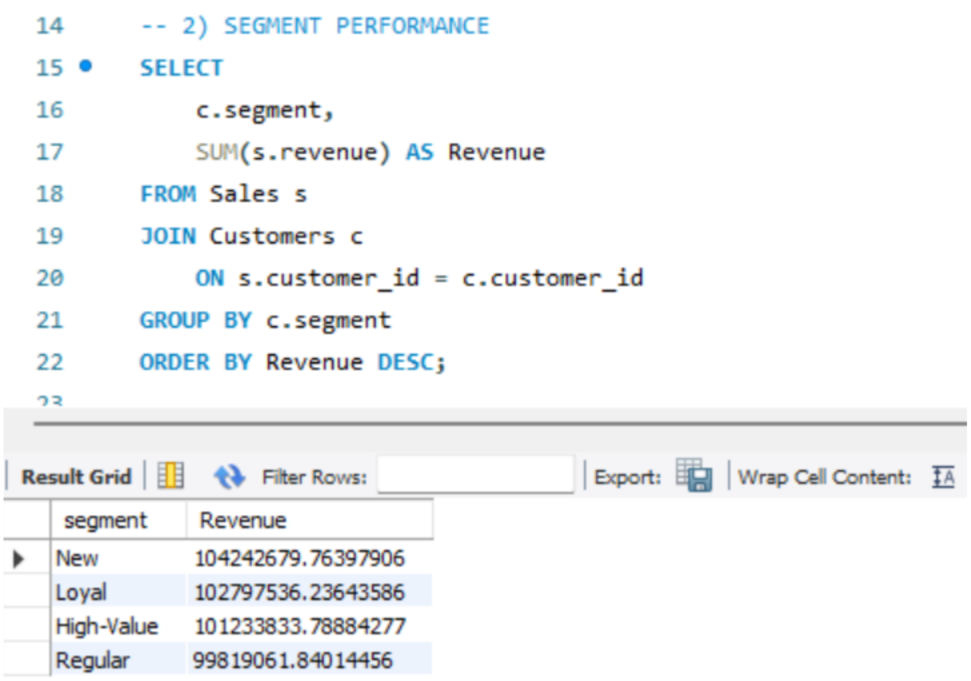


```
-- CUSTOMER ANALYTICS
-- 1) Customer Lifetime Revenue
SELECT
    c.customer_name,
    SUM(s.revenue) AS Customer_Lifetime_Revenue
FROM Sales s
JOIN Customers c
    ON s.customer_id = c.customer_id
GROUP BY c.customer_name
ORDER BY Customer_Lifetime_Revenue DESC;
```

customer_name	Customer_Lifetime_Revenue
Customer_3443	222412.90936389234
Customer_4210	215356.3470832561
Customer_3046	212226.09453027186
Customer_3033	211771.13432619558
Customer_2131	208982.0194527773
Customer_3038	207328.2895362899
Customer_4703	206008.8583778586
Customer_3867	202537.7461863457
Customer_1443	197242.44076073807
Customer_2057	196934.34135173453

-- 2) SEGMENT PERFORMANCE

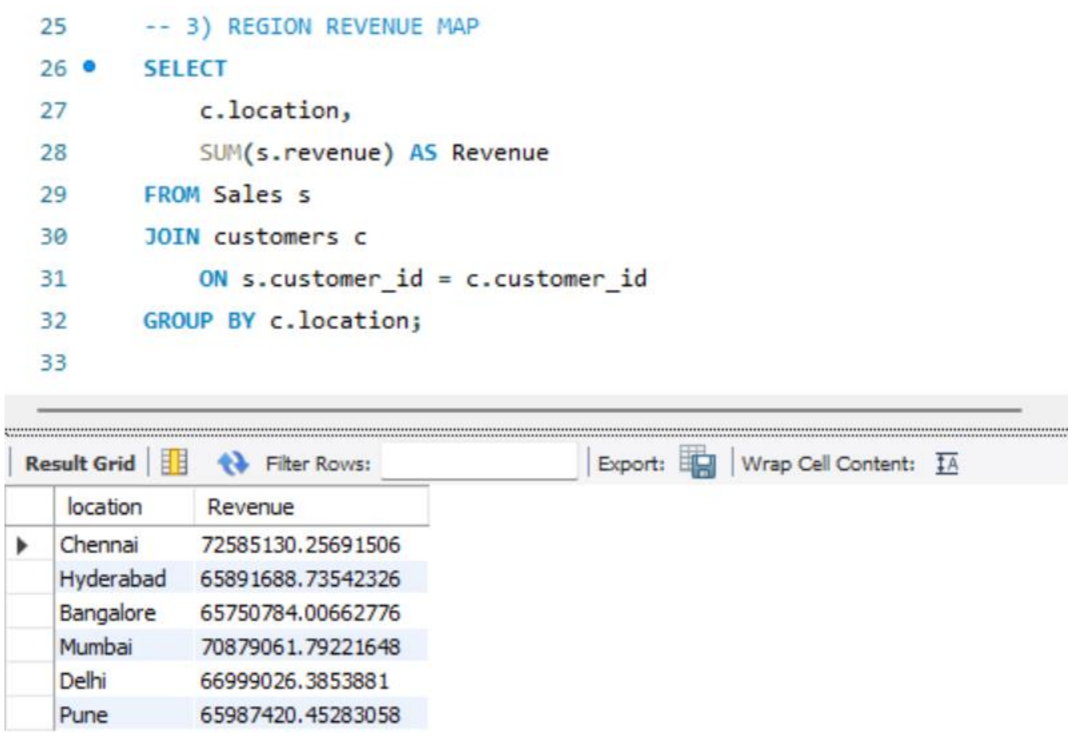
```
SELECT
    c.segment,
    SUM(s.revenue) AS Revenue
FROM Sales s
JOIN Customers c
    ON s.customer_id = c.customer_id
GROUP BY c.segment
ORDER BY Revenue DESC;
```



```
-- 2) SEGMENT PERFORMANCE
SELECT
    c.segment,
    SUM(s.revenue) AS Revenue
FROM Sales s
JOIN Customers c
    ON s.customer_id = c.customer_id
GROUP BY c.segment
ORDER BY Revenue DESC;
```

segment	Revenue
New	104242679.76397906
Loyal	102797536.23643586
High-Value	101233833.78884277
Regular	99819061.84014456

```
-- 3) REGION REVENUE MAP
SELECT
    c.location,
    SUM(s.revenue) AS Revenue
FROM Sales s
JOIN customers c
    ON s.customer_id = c.customer_id
GROUP BY c.location;
```



```sql
-- 3) REGION REVENUE MAP
SELECT
    c.location,
    SUM(s.revenue) AS Revenue
FROM Sales s
JOIN customers c
    ON s.customer_id = c.customer_id
GROUP BY c.location;
```

location	Revenue
Chennai	72585130.25691506
Hyderabad	65891688.73542326
Bangalore	65750784.00662776
Mumbai	70879061.79221648
Delhi	66999026.3853881
Pune	65987420.45283058