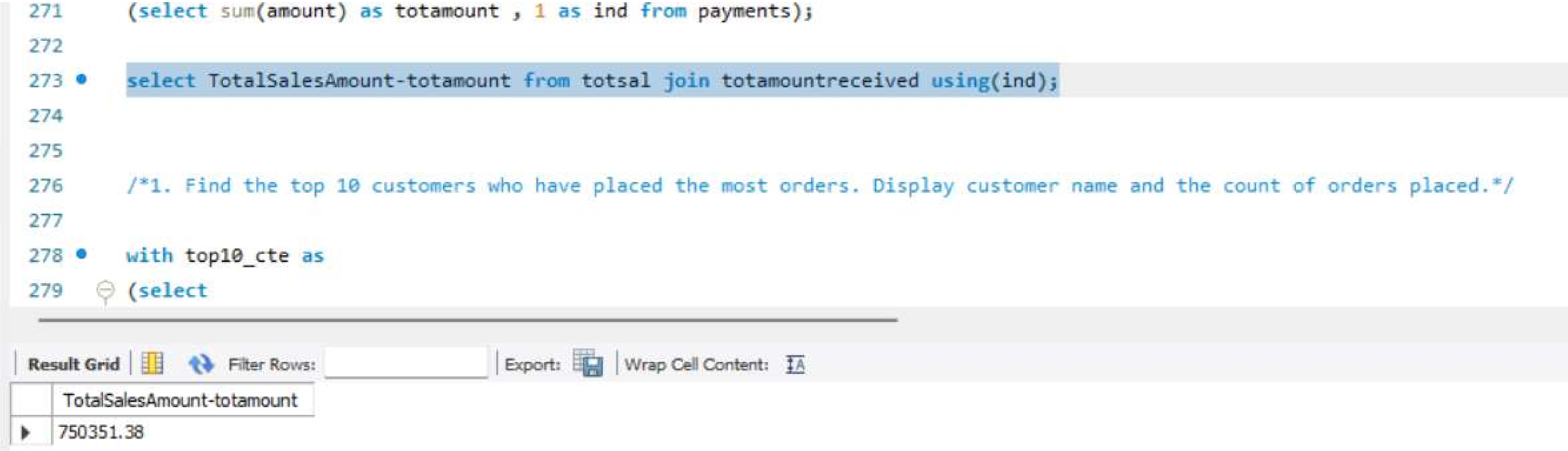
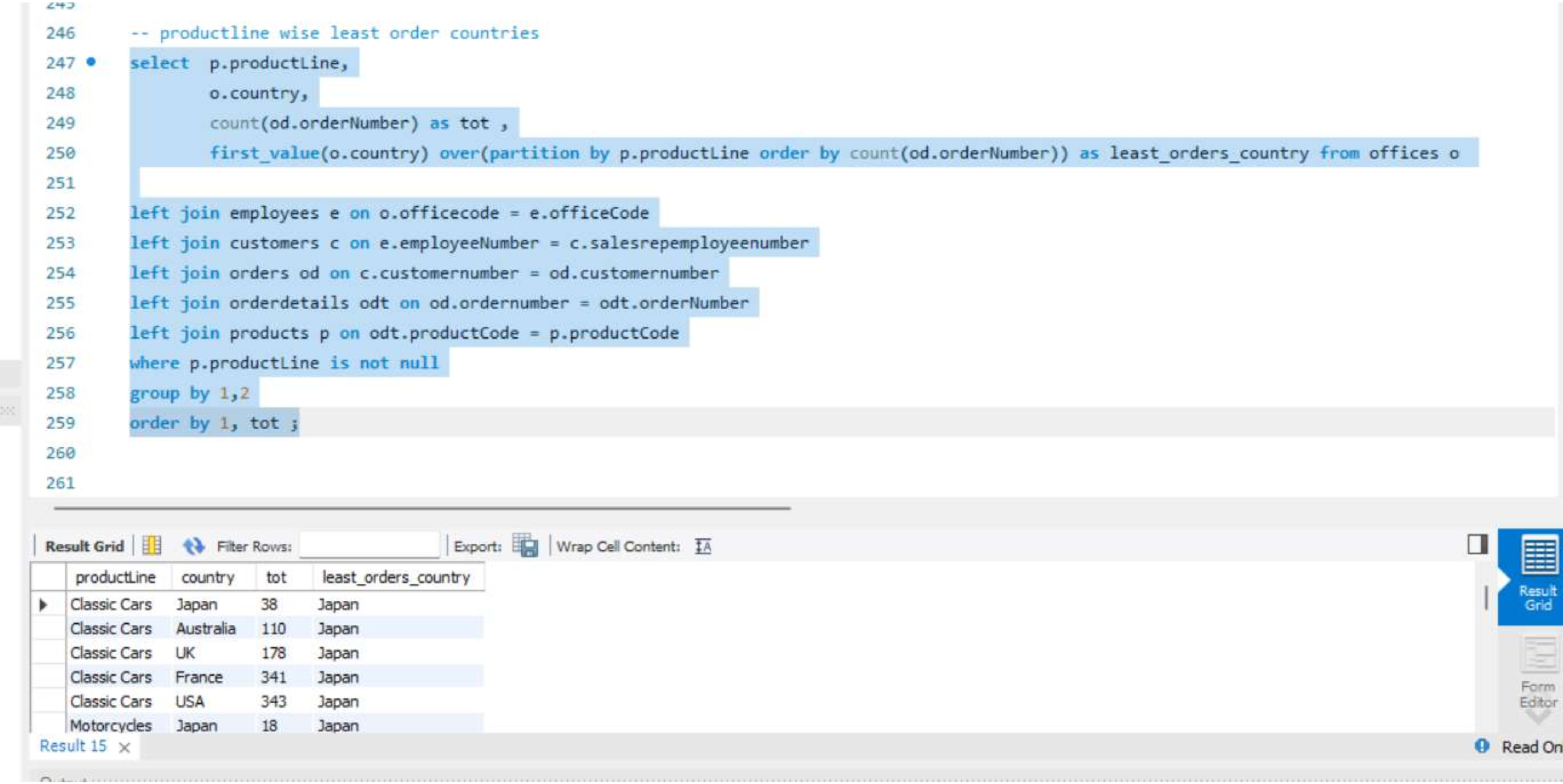


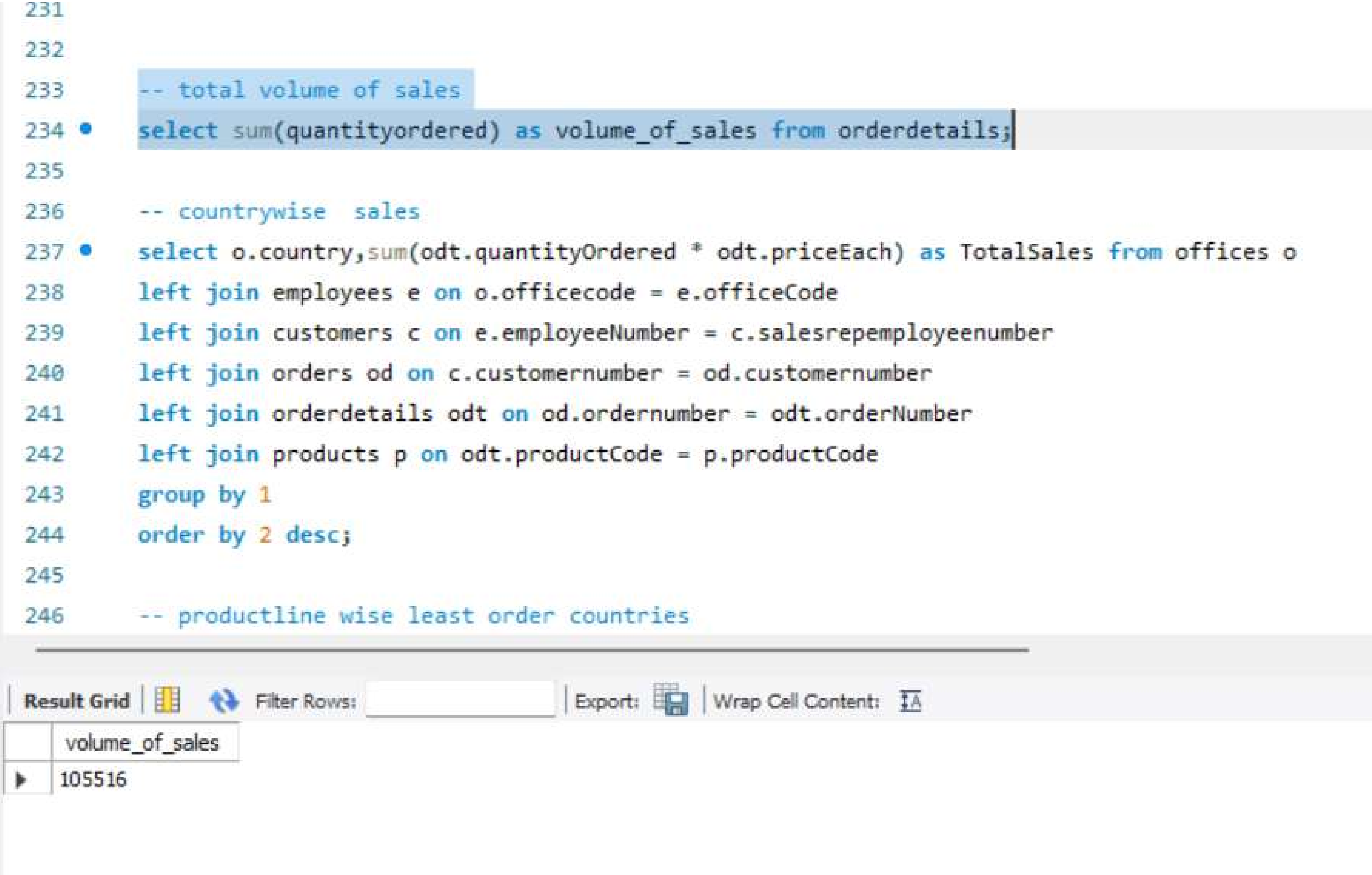
```sql
(select sum(amount) as totamount , 1 as ind from payments);

select TotalSalesAmount-totamount from totsal join totamountreceived using(ind);



/*1. Find the top 10 customers who have placed the most orders. Display customer name and the count of orders placed.*/

with top10_cte as
(select
```

```
TotalSalesAmount-totamount
750351.38
```



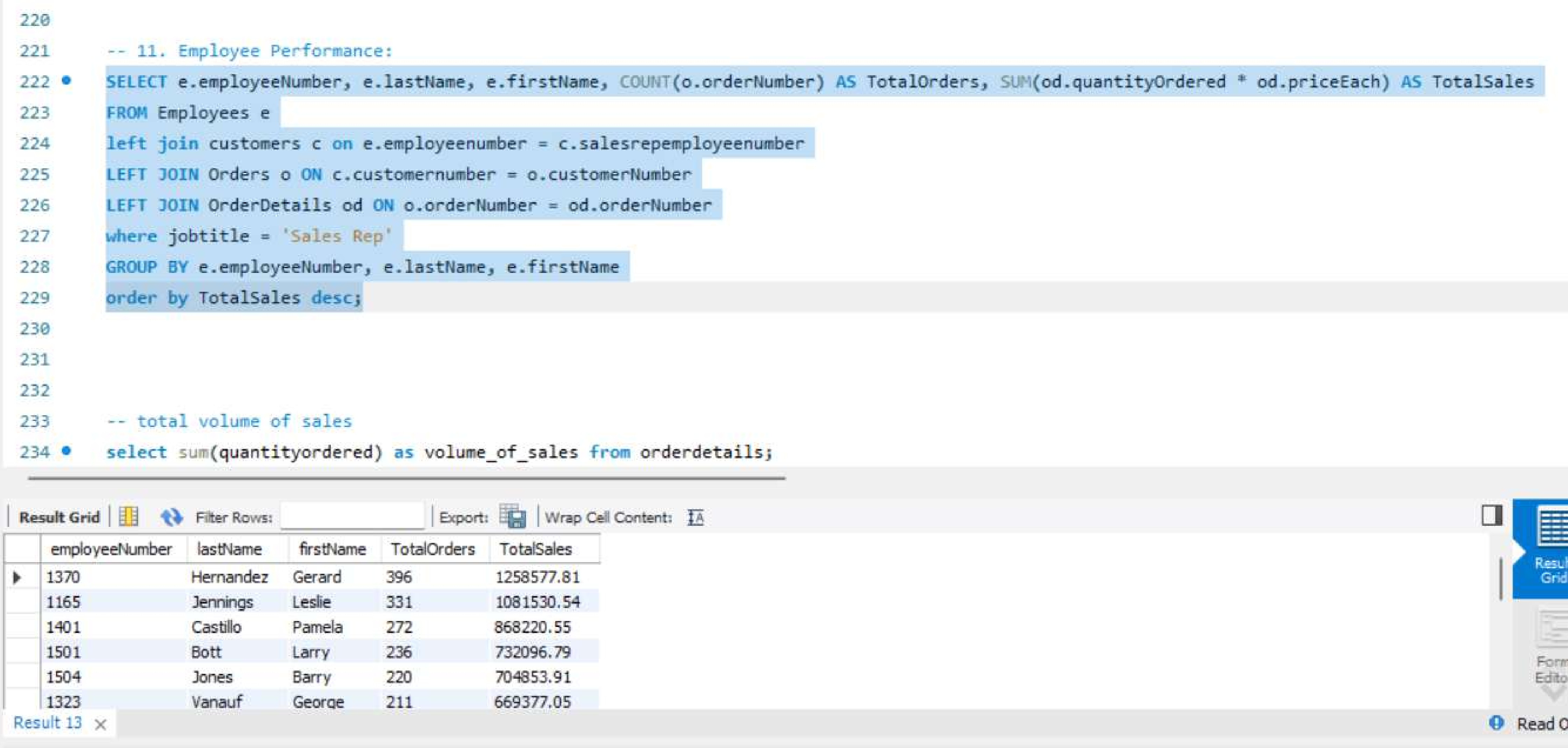
```
-- productline wise least order countries
select  p.productLine,
        o.country,
        count(od.orderNumber) as tot ,
        first_value(o.country) over(partition by p.productLine order by count(od.orderNumber)) as least_orders_country from offices o

left join employees e on o.officecode = e.officeCode
left join customers c on e.employeeNumber = c.salesrepemployeenumber
left join orders od on c.customernumber = od.customernumber
left join orderdetails odt on od.ordernumber = odt.orderNumber
left join products p on odt.productCode = p.productCode
where p.productLine is not null
group by 1,2
order by 1, tot ;
```

productLine	country	tot	least_orders_country
Classic Cars	Japan	38	Japan
Classic Cars	Australia	110	Japan
Classic Cars	UK	178	Japan
Classic Cars	France	341	Japan
Classic Cars	USA	343	Japan
Motorcycles	Japan	18	Japan



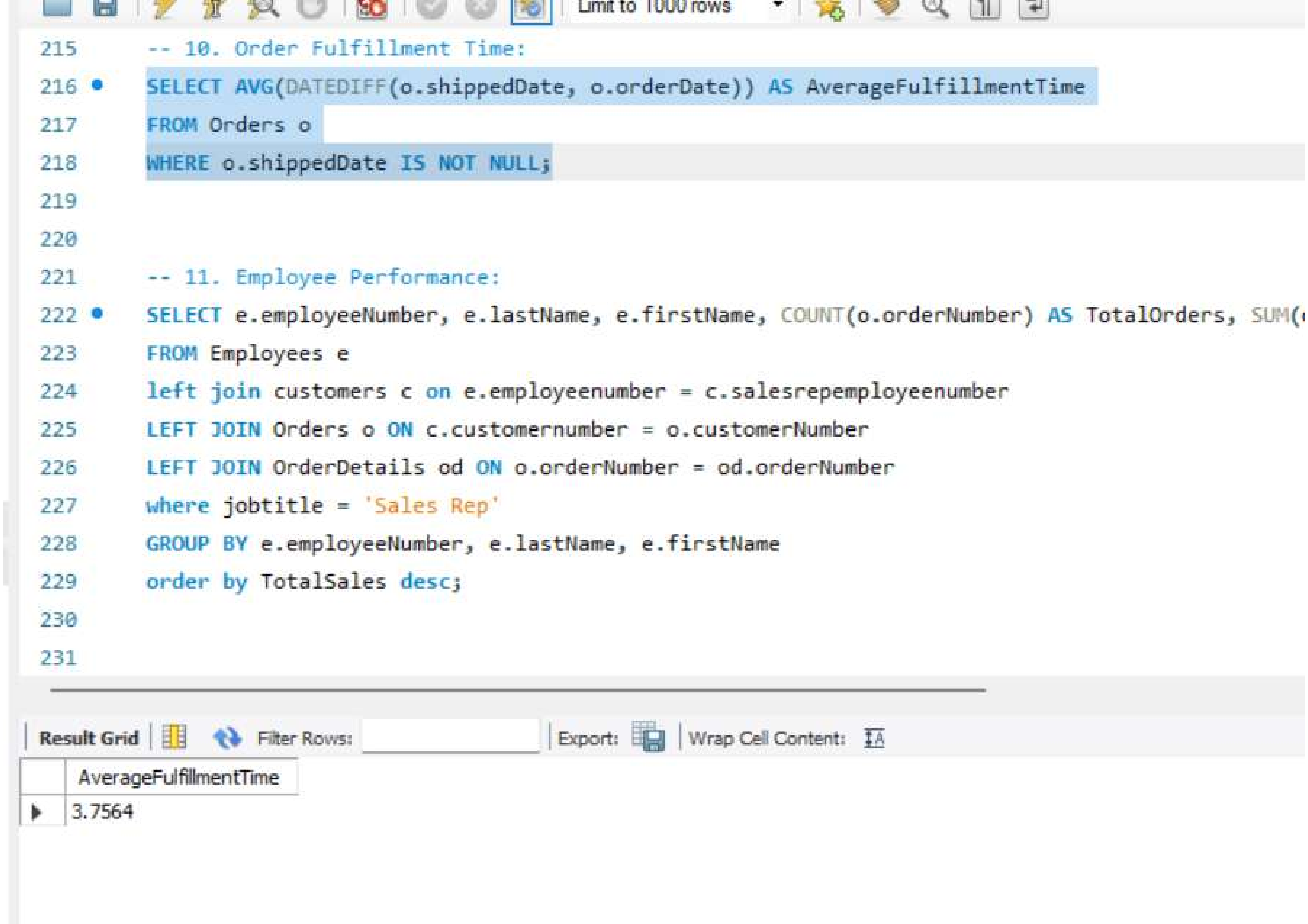
```sql


-- total volume of sales
select sum(quantityordered) as volume_of_sales from orderdetails;

-- countrywise  sales
select o.country,sum(odt.quantityOrdered * odt.priceEach) as TotalSales from offices o
left join employees e on o.officecode = e.officeCode
left join customers c on e.employeeNumber = c.salesrepemployeenumber
left join orders od on c.customernumber = od.customernumber
left join orderdetails odt on od.ordernumber = odt.orderNumber
left join products p on odt.productCode = p.productCode
group by 1
order by 2 desc;

-- productline wise least order countries
```

```
volume_of_sales
105516
```



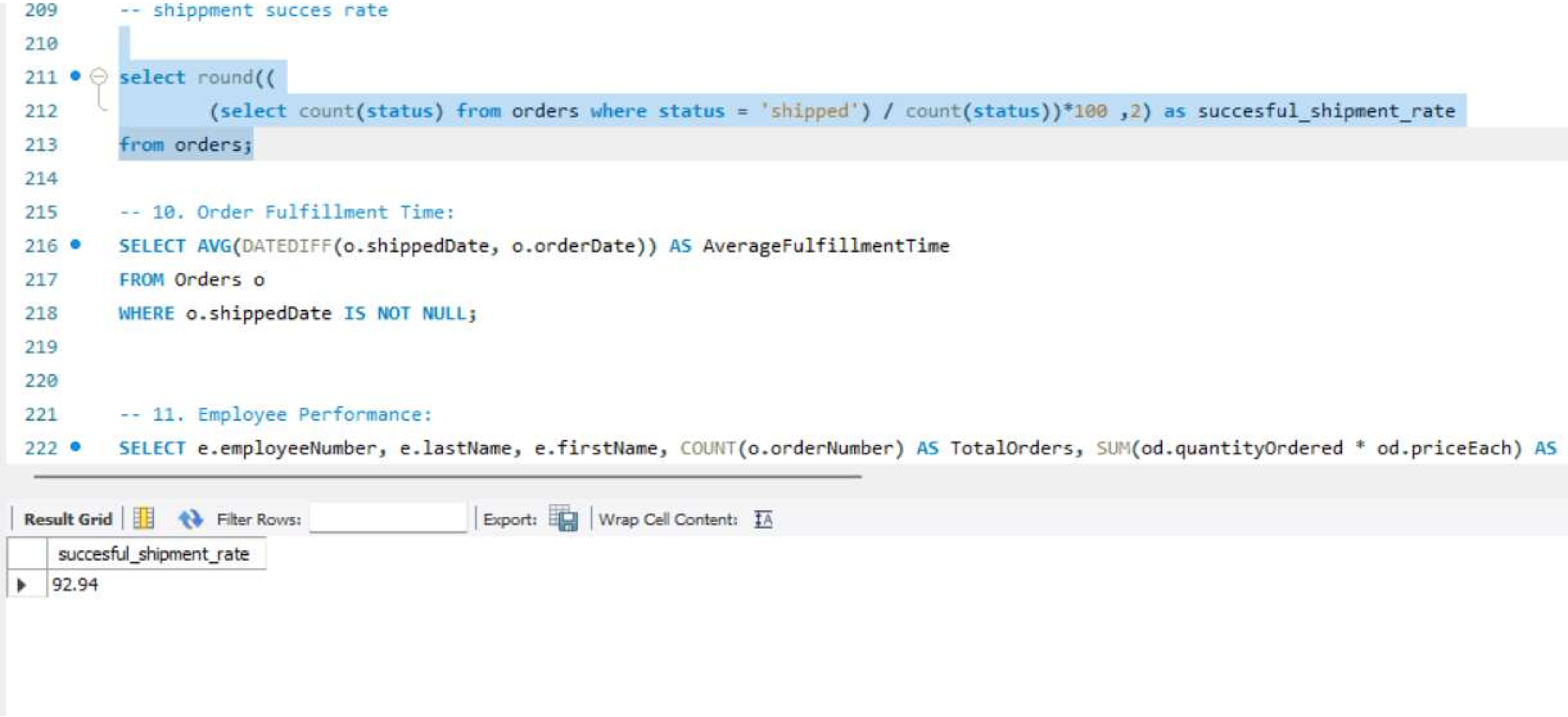
```
-- 11. Employee Performance:
SELECT e.employeeNumber, e.lastName, e.firstName, COUNT(o.orderNumber) AS TotalOrders, SUM(od.quantityOrdered * od.priceEach) AS TotalSales
FROM Employees e
left join customers c on e.employeenumber = c.salesrepemployeenumber
LEFT JOIN Orders o ON c.customernumber = o.customerNumber
LEFT JOIN OrderDetails od ON o.orderNumber = od.orderNumber
where jobtitle = 'Sales Rep'
GROUP BY e.employeeNumber, e.lastName, e.firstName
order by TotalSales desc;



-- total volume of sales
select sum(quantityordered) as volume_of_sales from orderdetails;
```

employeeNumber	lastName	firstName	TotalOrders	TotalSales
1370	Hernandez	Gerard	396	1258577.81
1165	Jennings	Leslie	331	1081530.54
1401	Castillo	Pamela	272	868220.55
1501	Bott	Larry	236	732096.79
1504	Jones	Barry	220	704853.91
1323	Vanauf	George	211	669377.05



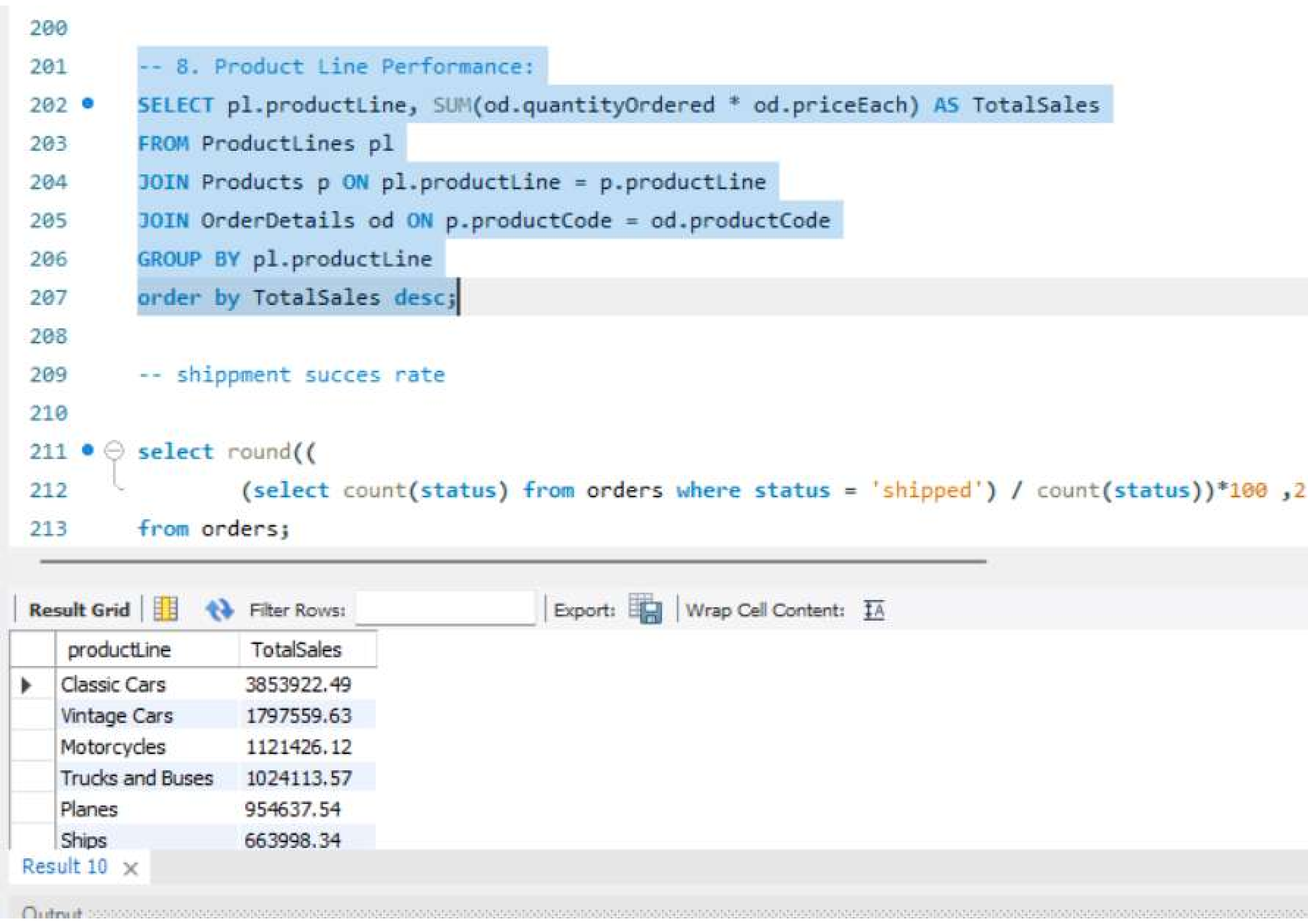
```sql
-- 10. Order Fulfillment Time:
SELECT AVG(DATEDIFF(o.shippedDate, o.orderDate)) AS AverageFulfillmentTime
FROM Orders o
WHERE o.shippedDate IS NOT NULL;


-- 11. Employee Performance:
SELECT e.employeeNumber, e.lastName, e.firstName, COUNT(o.orderNumber) AS TotalOrders, SUM(
FROM Employees e
left join customers c on e.employeenumber = c.salesrepemployeenumber
LEFT JOIN Orders o ON c.customernumber = o.customerNumber
LEFT JOIN OrderDetails od ON o.orderNumber = od.orderNumber
where jobtitle = 'Sales Rep'
GROUP BY e.employeeNumber, e.lastName, e.firstName
order by TotalSales desc;
```

```
AverageFulfillmentTime
3.7564
```



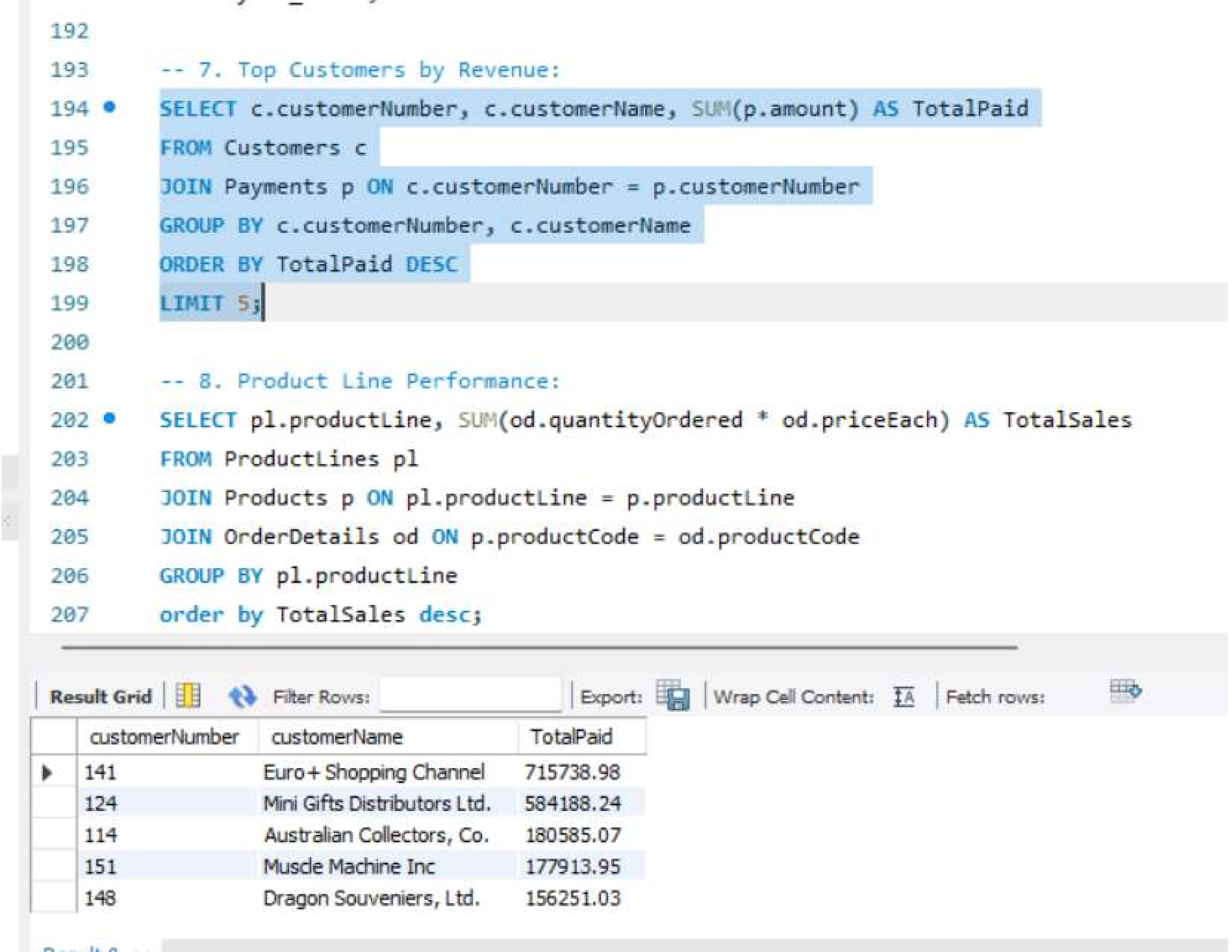
```
-- shippment succes rate

select round((
        (select count(status) from orders where status = 'shipped') / count(status))*100 ,2) as succesful_shipment_rate
from orders;

-- 10. Order Fulfillment Time:
SELECT AVG(DATEDIFF(o.shippedDate, o.orderDate)) AS AverageFulfillmentTime
FROM Orders o
WHERE o.shippedDate IS NOT NULL;


-- 11. Employee Performance:
SELECT e.employeeNumber, e.lastName, e.firstName, COUNT(o.orderNumber) AS TotalOrders, SUM(od.quantityOrdered * od.priceEach) AS
```

succesful_shipment_rate
92.94



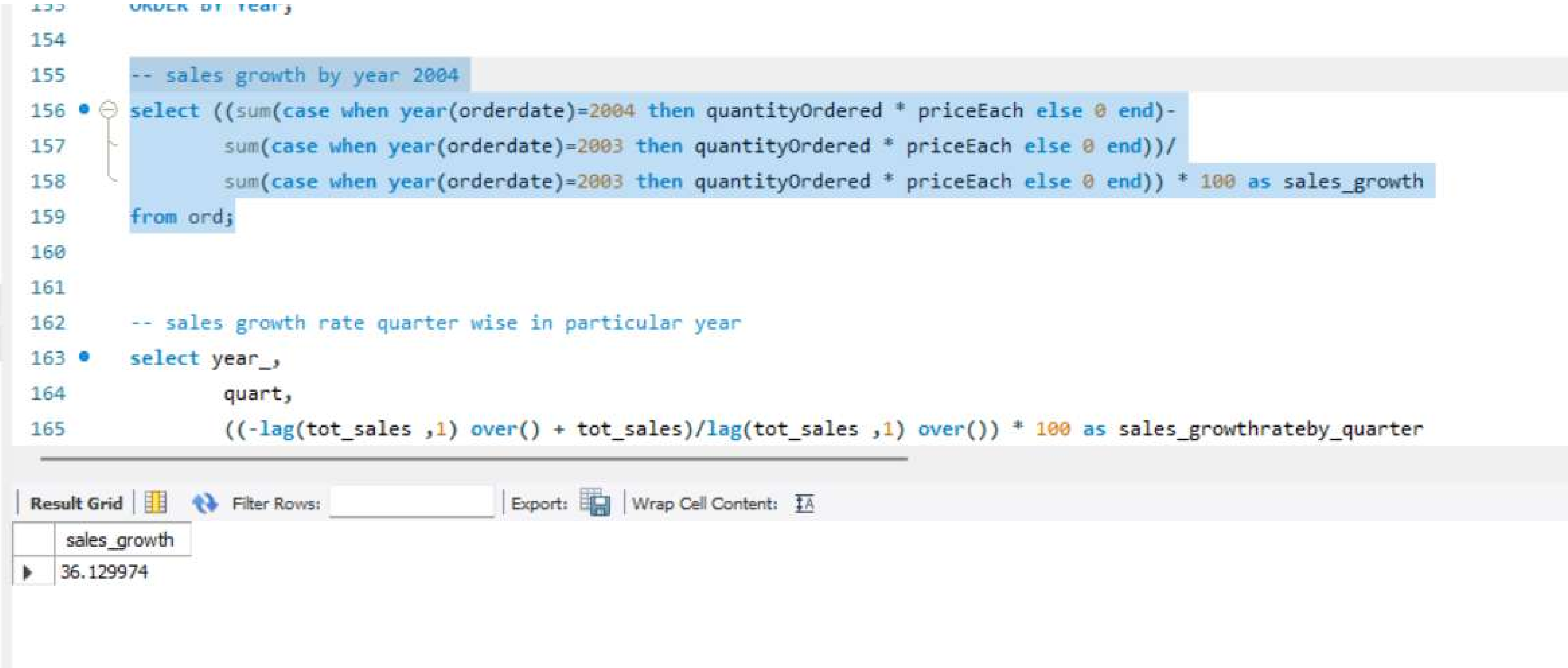
```sql
-- 8. Product Line Performance:
SELECT pl.productLine, SUM(od.quantityOrdered * od.priceEach) AS TotalSales
FROM ProductLines pl
JOIN Products p ON pl.productLine = p.productLine
JOIN OrderDetails od ON p.productCode = od.productCode
GROUP BY pl.productLine
order by TotalSales desc;

-- shippment succes rate

select round((
        (select count(status) from orders where status = 'shipped') / count(status))*100 ,2
from orders;
```

productLine	TotalSales
Classic Cars	3853922.49
Vintage Cars	1797559.63
Motorcycles	1121426.12
Trucks and Buses	1024113.57
Planes	954637.54
Ships	663998.34



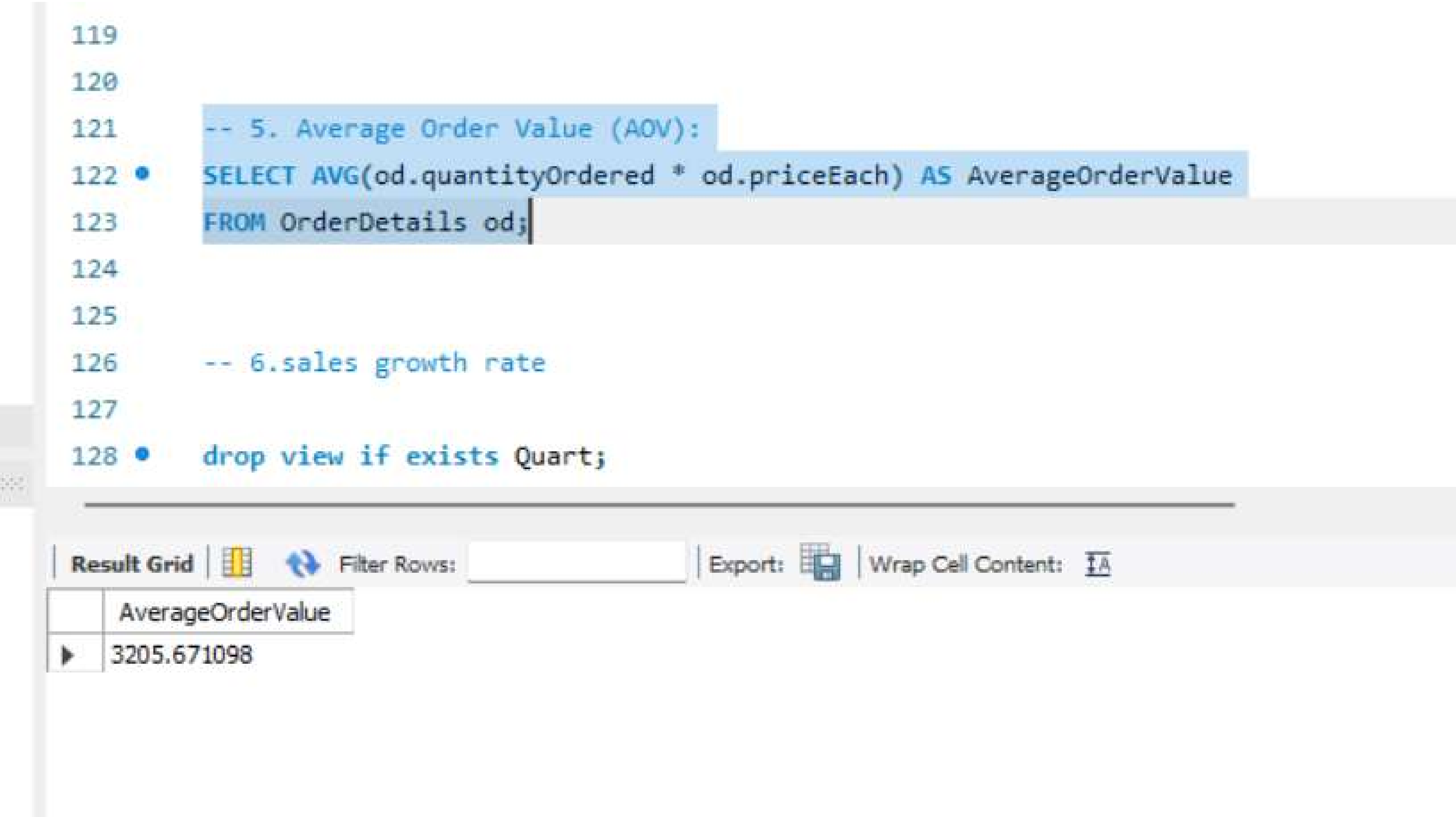
```
-- 7. Top Customers by Revenue:
SELECT c.customerNumber, c.customerName, SUM(p.amount) AS TotalPaid
FROM Customers c
JOIN Payments p ON c.customerNumber = p.customerNumber
GROUP BY c.customerNumber, c.customerName
ORDER BY TotalPaid DESC
LIMIT 5;

-- 8. Product Line Performance:
SELECT pl.productLine, SUM(od.quantityOrdered * od.priceEach) AS TotalSales
FROM ProductLines pl
JOIN Products p ON pl.productLine = p.productLine
JOIN OrderDetails od ON p.productCode = od.productCode
GROUP BY pl.productLine
order by TotalSales desc;
```

customerNumber	customerName	TotalPaid
141	Euro+ Shopping Channel	715738.98
124	Mini Gifts Distributors Ltd.	584188.24
114	Australian Collectors, Co.	180585.07
151	Muscle Machine Inc	177913.95
148	Dragon Souveniers, Ltd.	156251.03



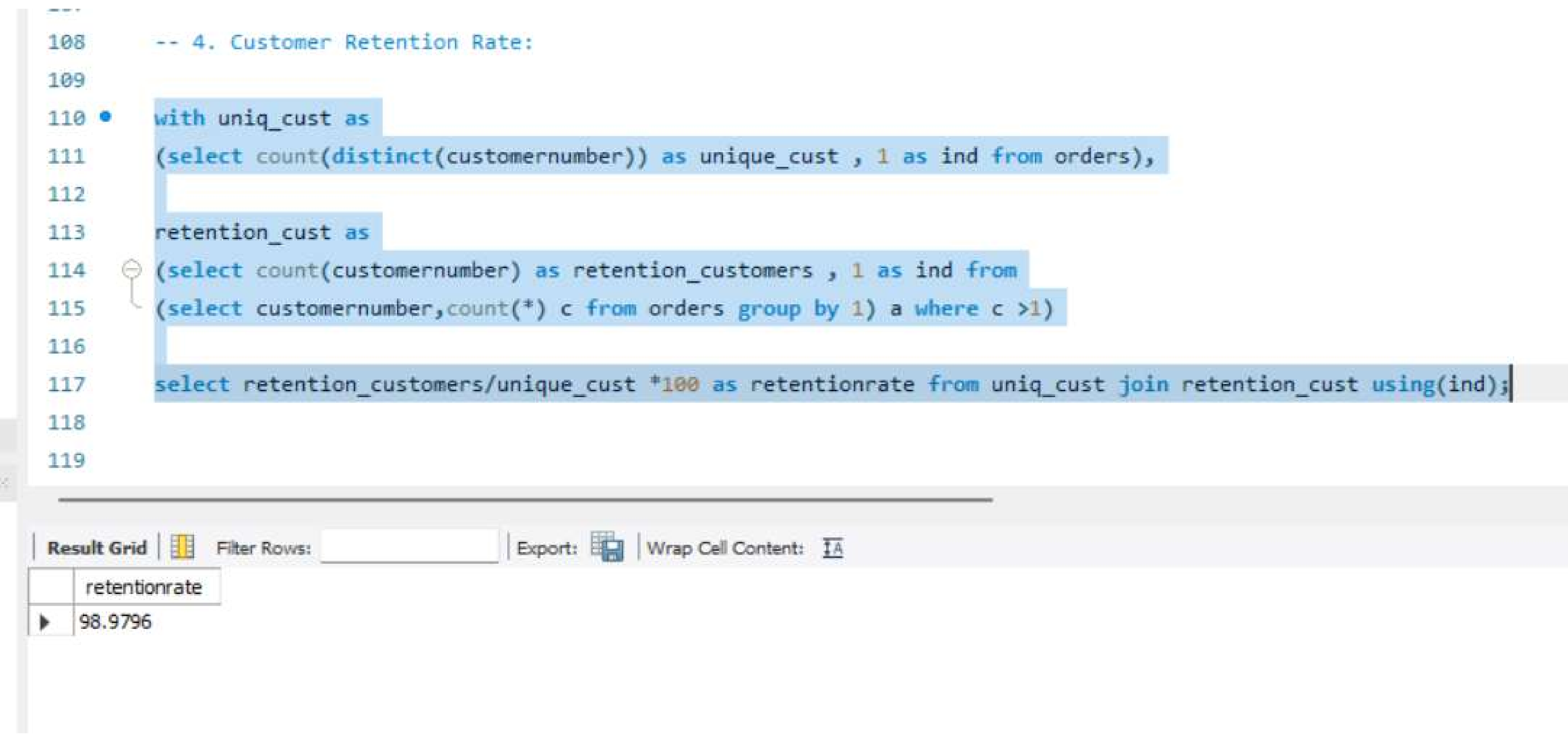
```
ORDER BY Year;

-- sales growth by year 2004
select ((sum(case when year(orderdate)=2004 then quantityOrdered * priceEach else 0 end)-
        sum(case when year(orderdate)=2003 then quantityOrdered * priceEach else 0 end))/
        sum(case when year(orderdate)=2003 then quantityOrdered * priceEach else 0 end)) * 100 as sales_growth
from ord;


-- sales growth rate quarter wise in particular year
select year_,
        quart,
        ((-lag(tot_sales ,1) over() + tot_sales)/lag(tot_sales ,1) over()) * 100 as sales_growthrateby_quarter
```

```
sales_growth
36.129974
```



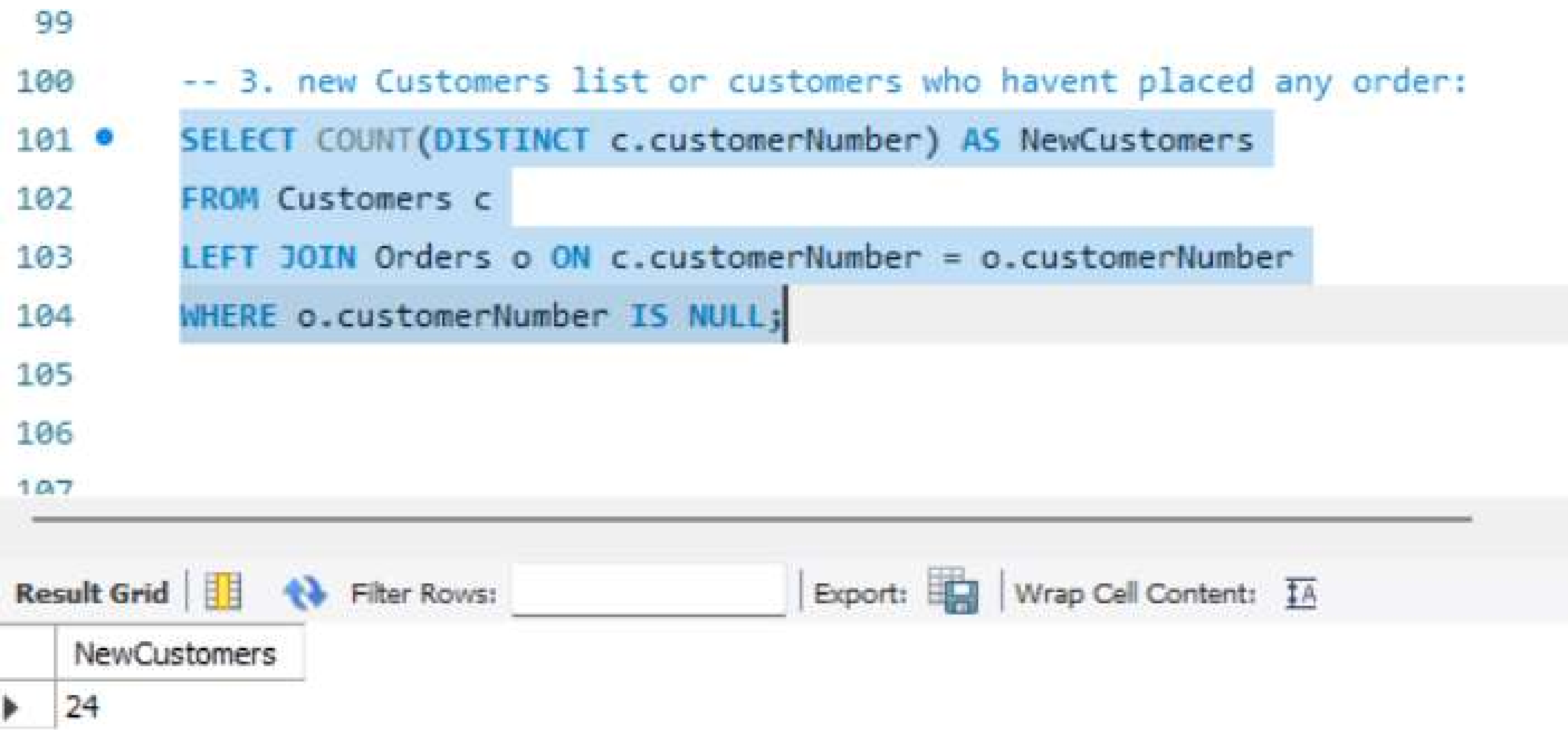
```
-- 5. Average Order Value (AOV):
SELECT AVG(od.quantityOrdered * od.priceEach) AS AverageOrderValue
FROM OrderDetails od;


-- 6.sales growth rate

drop view if exists Quart;
```

```
AverageOrderValue
3205.671098
```



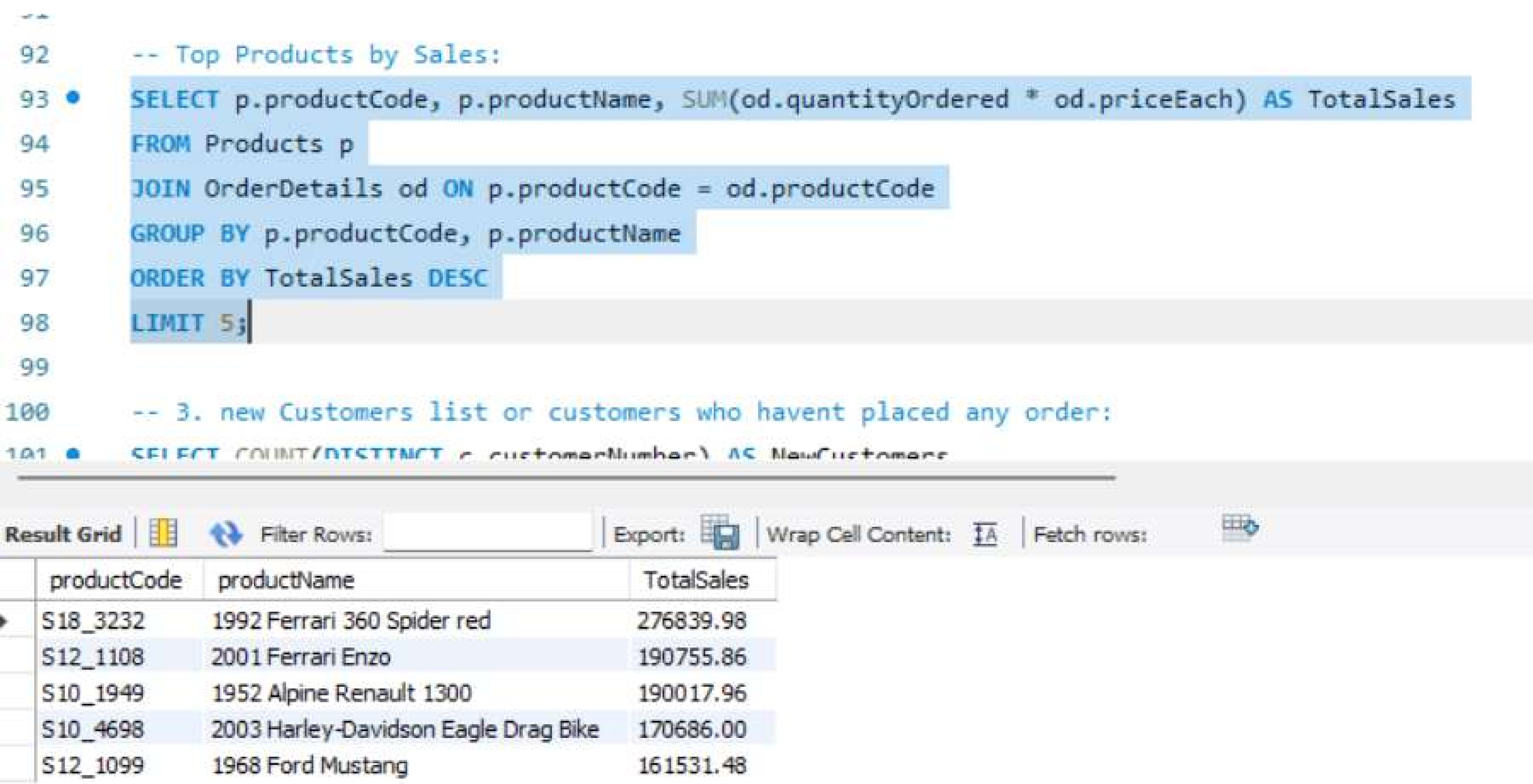
```sql
-- 4. Customer Retention Rate:

with uniq_cust as
(select count(distinct(customernumber)) as unique_cust , 1 as ind from orders),

retention_cust as
(select count(customernumber) as retention_customers , 1 as ind from
(select customernumber,count(*) c from orders group by 1) a where c >1)

select retention_customers/unique_cust *100 as retentionrate from uniq_cust join retention_cust using(ind);
```

retentionrate
98.9796



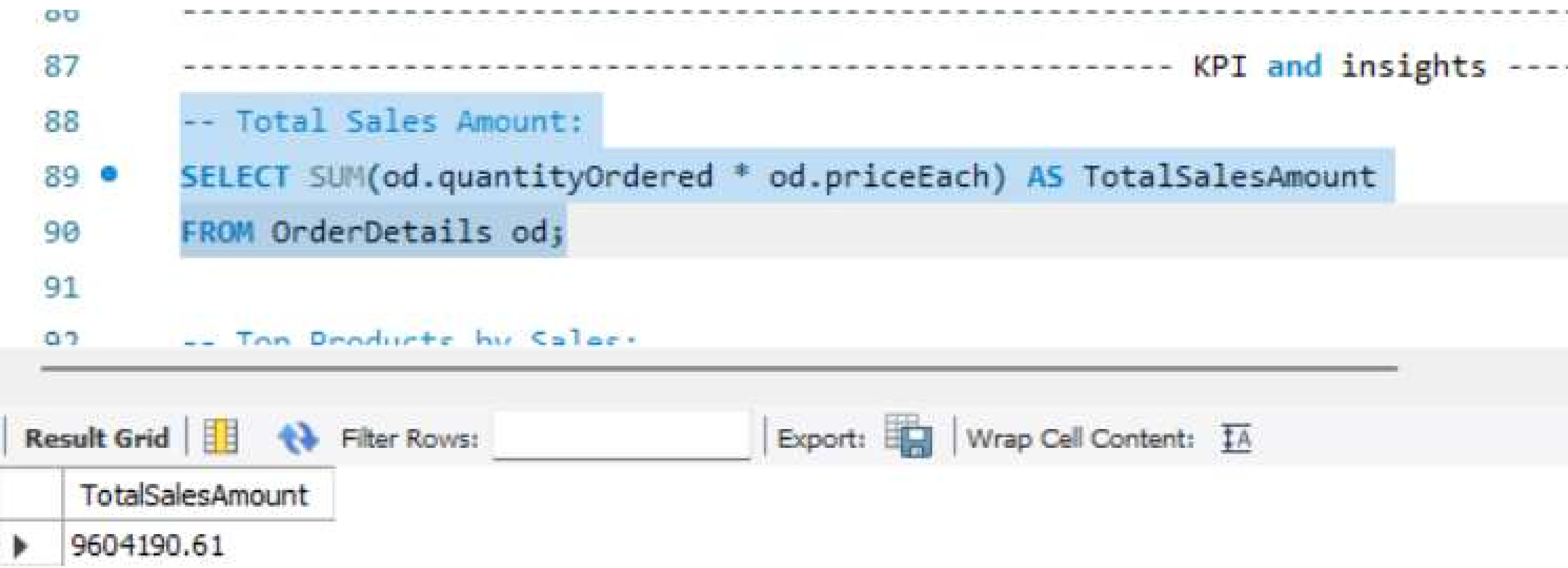
```sql
-- 3. new Customers list or customers who havent placed any order:
SELECT COUNT(DISTINCT c.customerNumber) AS NewCustomers
FROM Customers c
LEFT JOIN Orders o ON c.customerNumber = o.customerNumber
WHERE o.customerNumber IS NULL;
```

```
NewCustomers
24
```



```sql
-- Top Products by Sales:
SELECT p.productCode, p.productName, SUM(od.quantityOrdered * od.priceEach) AS TotalSales
FROM Products p
JOIN OrderDetails od ON p.productCode = od.productCode
GROUP BY p.productCode, p.productName
ORDER BY TotalSales DESC
LIMIT 5;

-- 3. new Customers list or customers who havent placed any order:
SELECT COUNT(DISTINCT c.customerNumber) AS NewCustomers
```

productCode	productName	TotalSales
S18_3232	1992 Ferrari 360 Spider red	276839.98
S12_1108	2001 Ferrari Enzo	190755.86
S10_1949	1952 Alpine Renault 1300	190017.96
S10_4698	2003 Harley-Davidson Eagle Drag Bike	170686.00
S12_1099	1968 Ford Mustang	161531.48



```
---------------------------------------------------------------------------------------
--------------------------------------------------------- KPI and insights ----
-- Total Sales Amount:
SELECT SUM(od.quantityOrdered * od.priceEach) AS TotalSalesAmount
FROM OrderDetails od;

-- Top Products by Sales:
```

TotalSalesAmount
9604190.61