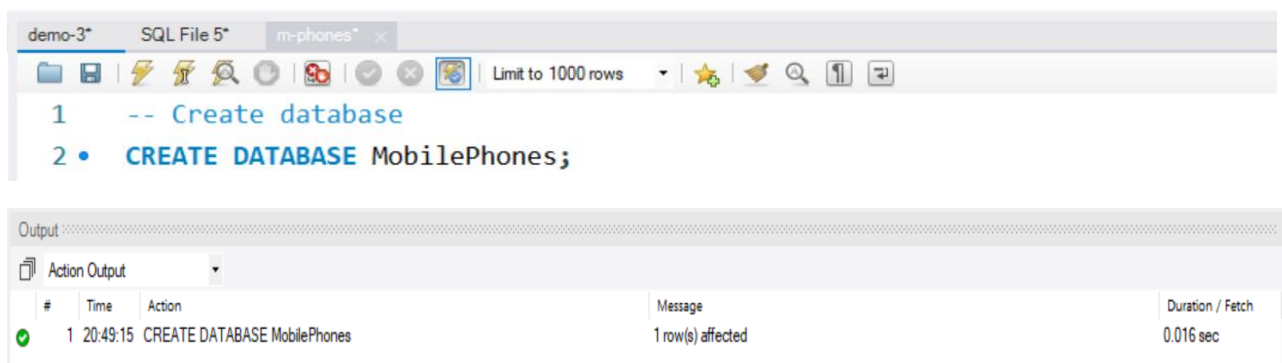


# MOBILE PHONES - CASE STUDY

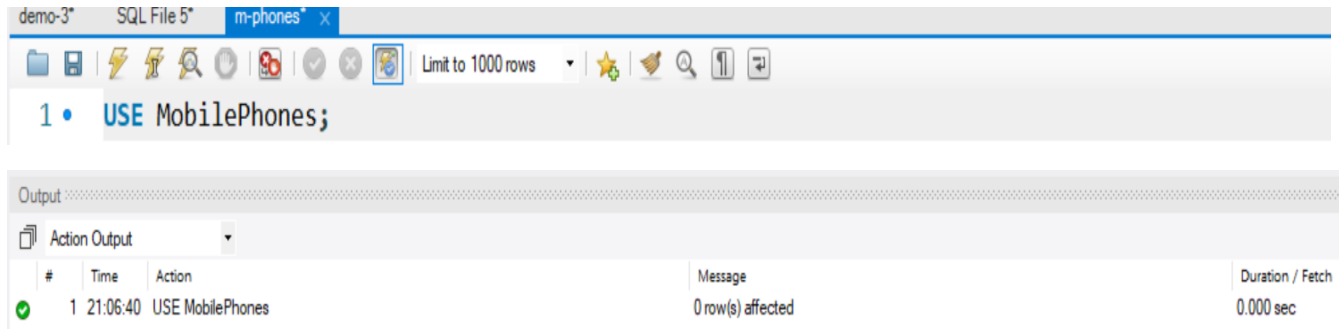


- Create a new database in my SQL work bench
- ✓ **Syntax:** Create database Mobilephones;



- Use the database which we have created

✓ **Syntax:** Use MobilePhones;

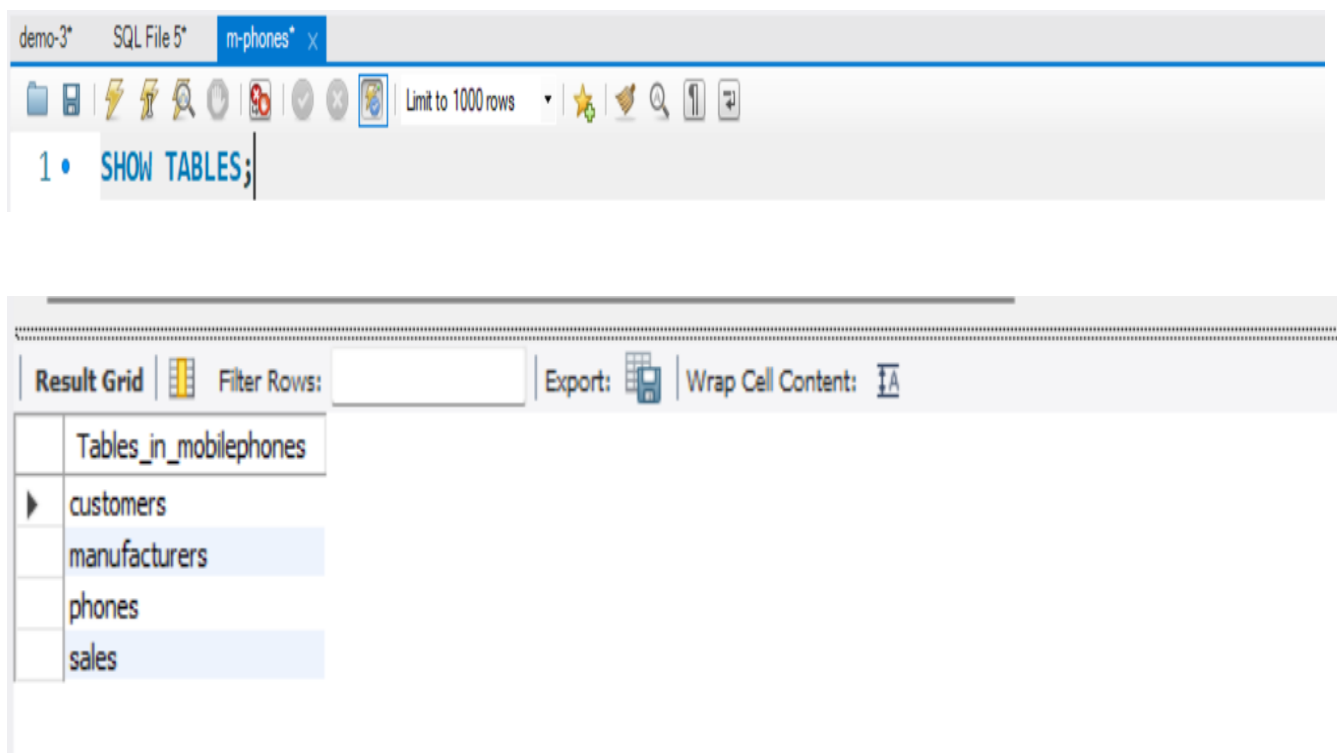


The screenshot shows a SQL IDE window with a tab labeled 'm-phones'. The command editor contains the text '1 • USE MobilePhones;'. Below the editor, the 'Output' pane shows the 'Action Output' table:

#	Time	Action	Message	Duration / Fetch
1	21:06:40	USE MobilePhones	0 row(s) affected	0.000 sec

- Create a tables

✓ **Syntax:** Show tables;



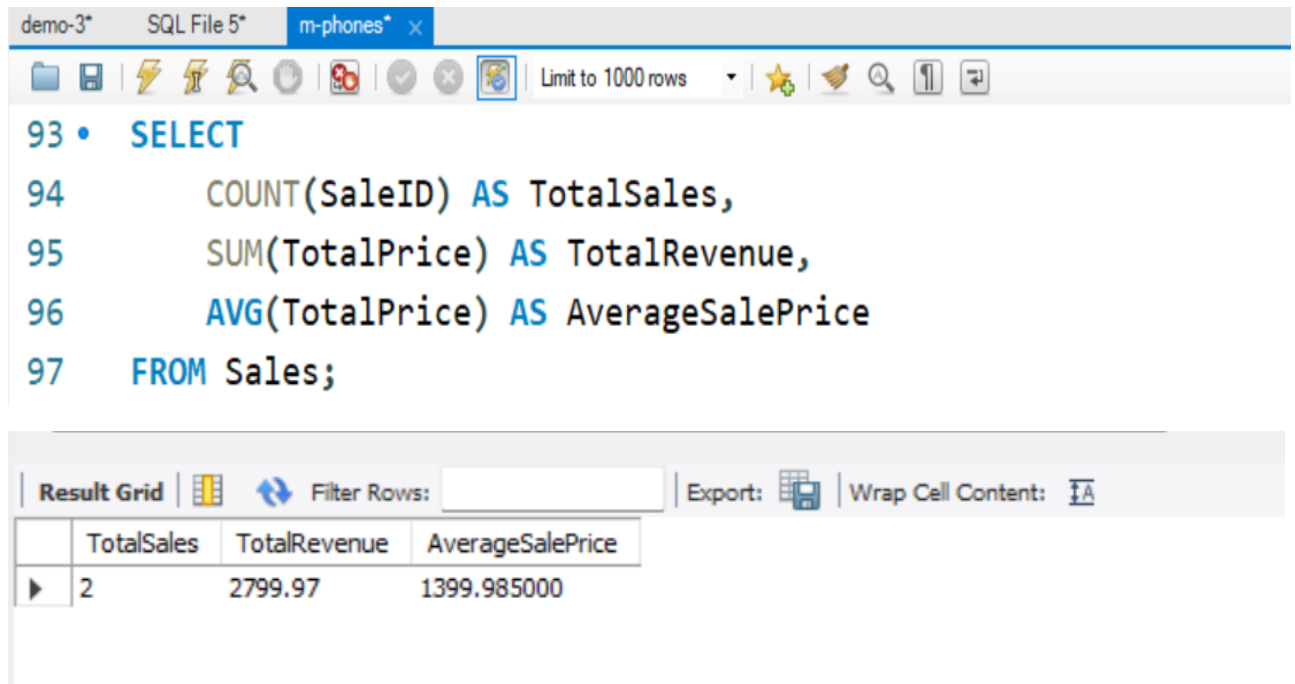
The screenshot shows the SQL IDE with the command '1 • SHOW TABLES;' entered. Below the editor, the 'Result Grid' displays the output of the command:

Tables_in_mobilephones
customers
manufacturers
phones
sales

- The tables are Create successfully we can see the tables in the Database **MobilePhones**.

# CASE STUDY QUESTIONS

1. Aggregate functions: Get total sales and average price?



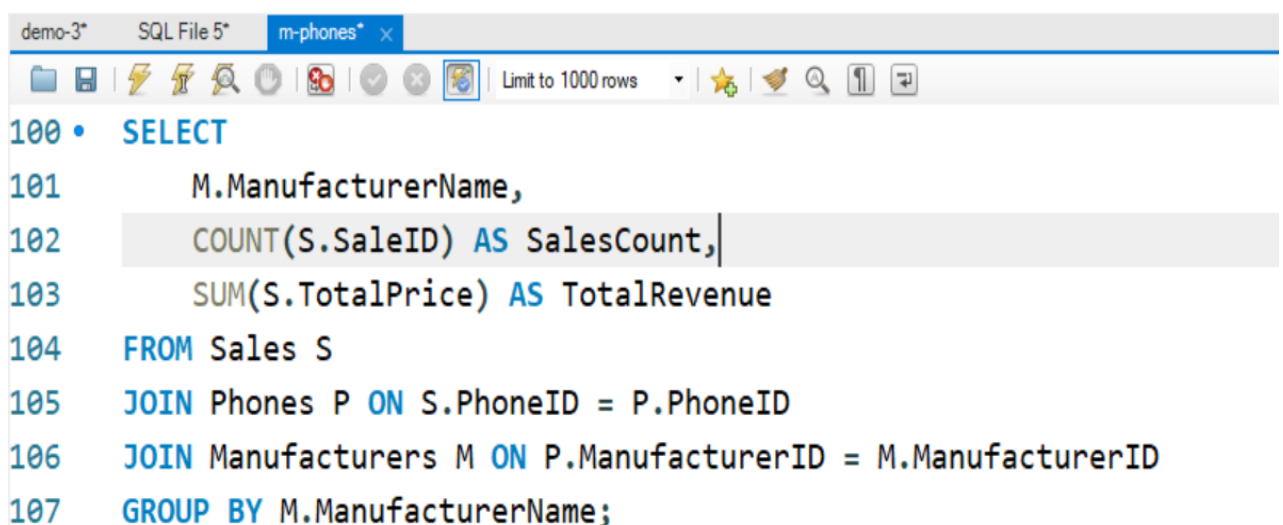
The screenshot shows a SQL IDE window with a query editor and a result grid. The query editor contains the following SQL code:

```
93 • SELECT
94     COUNT(SaleID) AS TotalSales,
95     SUM(TotalPrice) AS TotalRevenue,
96     AVG(TotalPrice) AS AverageSalePrice
97 FROM Sales;
```

The result grid displays the following data:

	TotalSales	TotalRevenue	AverageSalePrice
▶	2	2799.97	1399.985000

2. Group by: Get total sales per manufacturer?



The screenshot shows a SQL IDE window with a query editor. The query editor contains the following SQL code:

```
100 • SELECT
101     M.ManufacturerName,
102     COUNT(S.SaleID) AS SalesCount,
103     SUM(S.TotalPrice) AS TotalRevenue
104 FROM Sales S
105 JOIN Phones P ON S.PhoneID = P.PhoneID
106 JOIN Manufacturers M ON P.ManufacturerID = M.ManufacturerID
107 GROUP BY M.ManufacturerName;
```

Result Grid				Filter Rows:	Export:	Wrap Cell Content:
	ManufacturerName	SalesCount	TotalRevenue			
▶	Apple	1	1999.98			
	Samsung	1	799.99			

### 3. Query to join tables and display sales information?

```

demo-3*  SQL File 5*  m-phones* x
Limit to 1000 rows

83 • SELECT
84     S.SaleID,
85     C.FirstName,
86     C.LastName,
87     P.ModelName,
88     M.ManufacturerName,
89     S.SaleDate,
90     S.Quantity,
91     S.TotalPrice
92 FROM Sales S
93 JOIN Customers C ON S.CustomerID = C.CustomerID
94 JOIN Phones P ON S.PhoneID = P.PhoneID
95 JOIN Manufacturers M ON P.ManufacturerID = M.ManufacturerID;

```

Result Grid									Filter Rows:	Export:	Wrap Cell Content:
	SaleID	FirstName	LastName	ModelName	ManufacturerName	SaleDate	Quantity	TotalPrice			
▶	1	John	Doe	iPhone 14	Apple	2024-07-01	2	1999.98			
	2	Jane	Smith	Galaxy S22	Samsung	2024-07-05	1	799.99			

#### 4. Subquery: Get the most expensive phone?

demo-3\* SQL File 5\* m-phones\* x

Limit to 1000 rows

```
116 • SELECT
117     PhoneID,
118     ModelName,
119     Price
120 FROM Phones
121 WHERE Price = (SELECT MAX(Price) FROM Phones);
```

Result Grid

	PhoneID	ModelName	Price
▶	1	iPhone 14	999.99
*	NULL	NULL	NULL

#### 5. Window function: Rank phones by price?

demo-3\* SQL File 5\* m-phones\* x

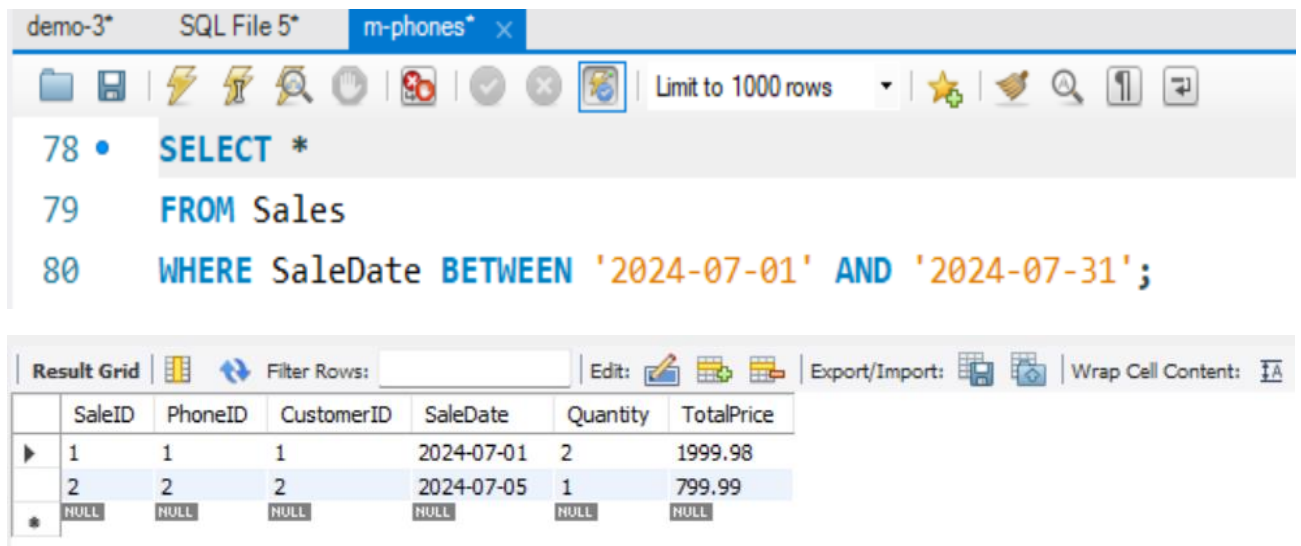
Limit to 1000 rows

```
188 • SELECT
189     PhoneID,
190     ModelName,
191     Price,
192     RANK() OVER (ORDER BY Price DESC) AS PriceRank
193 FROM Phones;
```

Result Grid

	PhoneID	ModelName	Price	PriceRank
▶	1	iPhone 14	999.99	1
	2	Galaxy S22	799.99	2
	4	OnePlus 9	729.99	3
	3	Mi 11	699.99	4

6. How can find all sales made in July 2024?



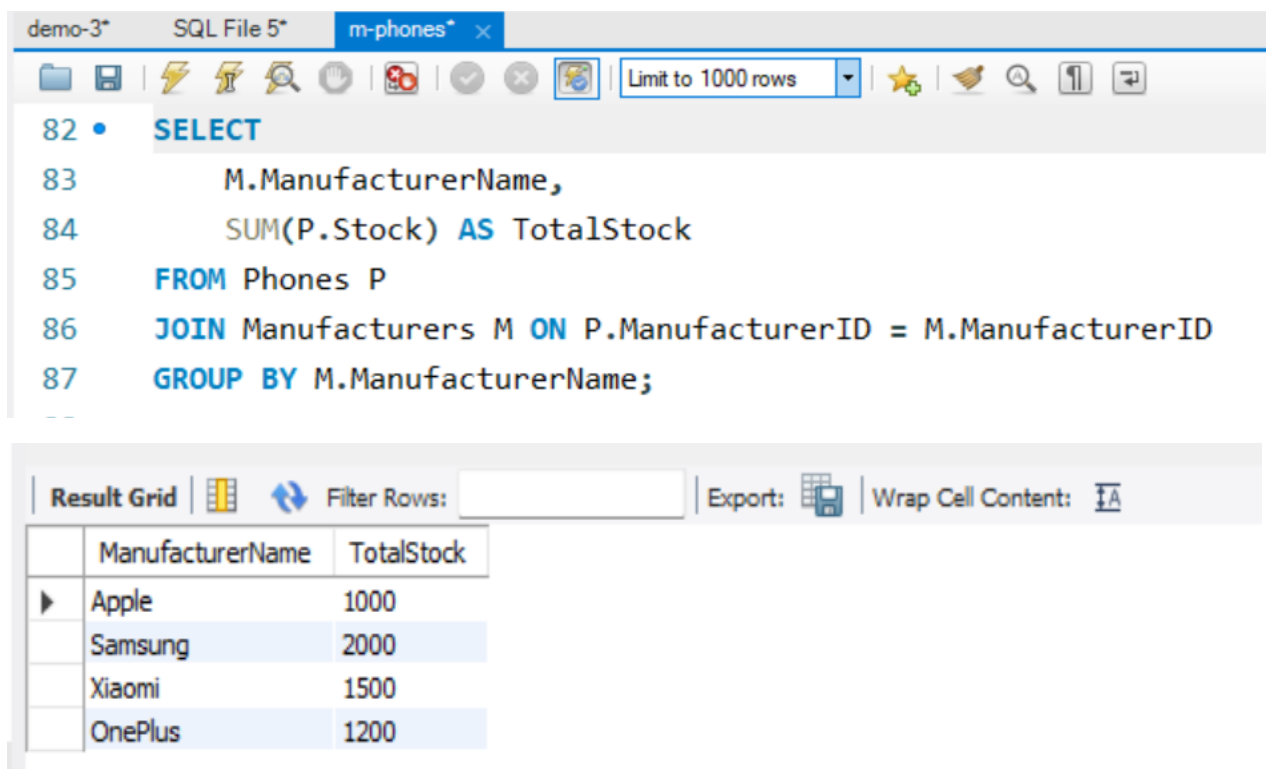
The screenshot shows a SQL IDE with a query editor and a result grid. The query editor contains the following SQL code:

```
78 • SELECT *
79 FROM Sales
80 WHERE SaleDate BETWEEN '2024-07-01' AND '2024-07-31';
```

The result grid displays the following data:

	SaleID	PhoneID	CustomerID	SaleDate	Quantity	TotalPrice
▶	1	1	1	2024-07-01	2	1999.98
	2	2	2	2024-07-05	1	799.99
*	NULL	NULL	NULL	NULL	NULL	NULL

7. How can fine the number of phones in stock for each manufacturer?



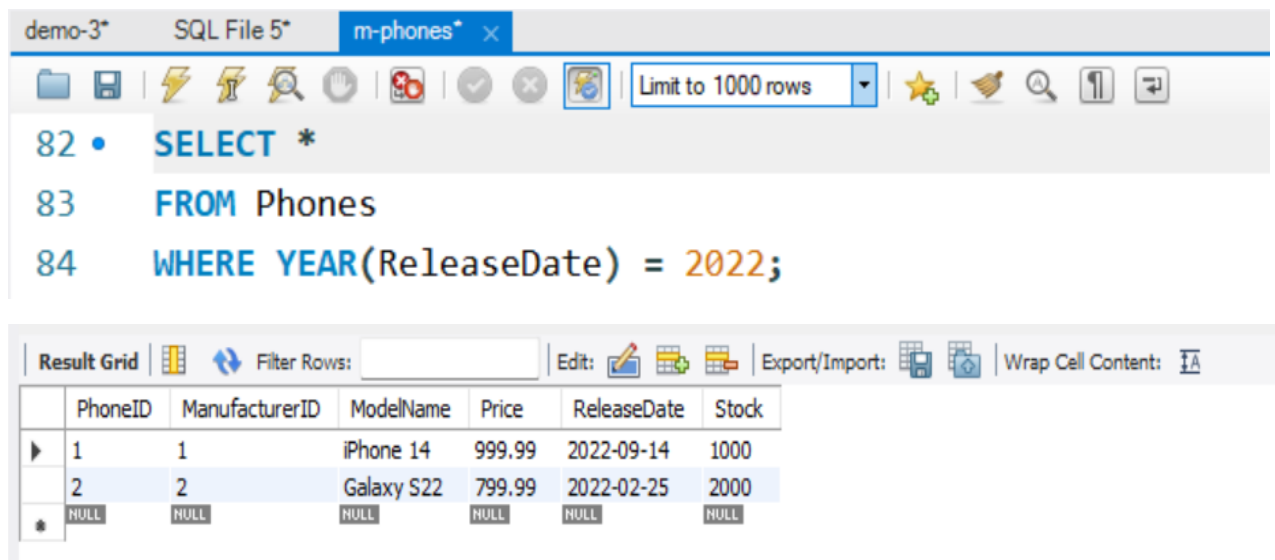
The screenshot shows a SQL IDE with a query editor and a result grid. The query editor contains the following SQL code:

```
82 • SELECT
83     M.ManufacturerName,
84     SUM(P.Stock) AS TotalStock
85 FROM Phones P
86 JOIN Manufacturers M ON P.ManufacturerID = M.ManufacturerID
87 GROUP BY M.ManufacturerName;
```

The result grid displays the following data:

	ManufacturerName	TotalStock
▶	Apple	1000
	Samsung	2000
	Xiaomi	1500
	OnePlus	1200

8. Using Where details of all phones released in 2022?



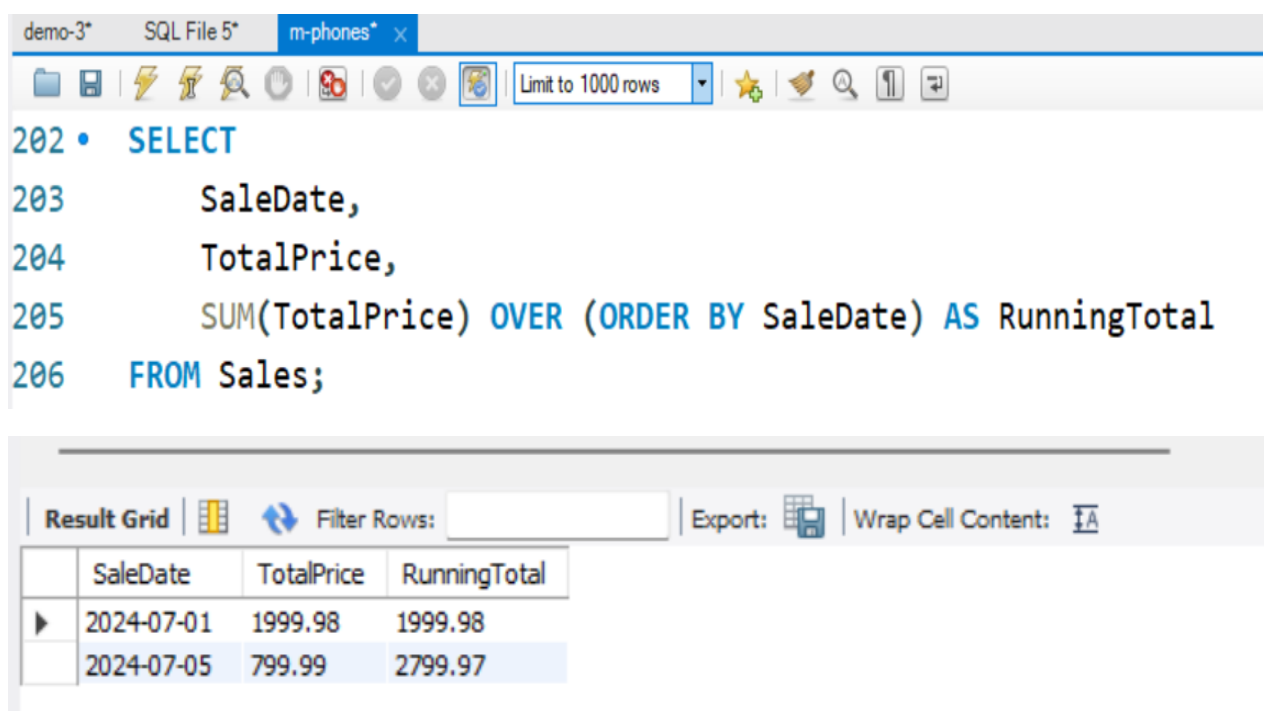
The screenshot shows a SQL IDE window with a query editor and a result grid. The query editor contains the following SQL code:

```
82 • SELECT *
83 FROM Phones
84 WHERE YEAR(ReleaseDate) = 2022;
```

The result grid displays the following data:

	PhoneID	ManufacturerID	ModelName	Price	ReleaseDate	Stock
▶	1	1	iPhone 14	999.99	2022-09-14	1000
	2	2	Galaxy S22	799.99	2022-02-25	2000
*	NULL	NULL	NULL	NULL	NULL	NULL

9. Window function: Calculate running total of sales by date?



The screenshot shows a SQL IDE window with a query editor and a result grid. The query editor contains the following SQL code:

```
202 • SELECT
203     SaleDate,
204     TotalPrice,
205     SUM(TotalPrice) OVER (ORDER BY SaleDate) AS RunningTotal
206 FROM Sales;
```

The result grid displays the following data:

	SaleDate	TotalPrice	RunningTotal
▶	2024-07-01	1999.98	1999.98
	2024-07-05	799.99	2799.97



10. Find the average price of all phones in the Phone table?

The screenshot shows a SQL IDE window with the following components:

- Tab Bar:** Contains three tabs: "demo-3\*", "SQL File 5\*", and "m-phones\* x".
- Toolbar:** Includes icons for file operations (Save, Open, Print, etc.), a "Limit to 1000 rows" dropdown, and other utility icons.
- SQL Editor:** Contains the query: `80 • SELECT AVG(Price) AS AveragePrice FROM Phones;`
- Result Grid:** Displays the query results in a table with one column, "AveragePrice", and one row with the value "807.490000".

AveragePrice
807.490000

11. Using Distinct unique sales dates?

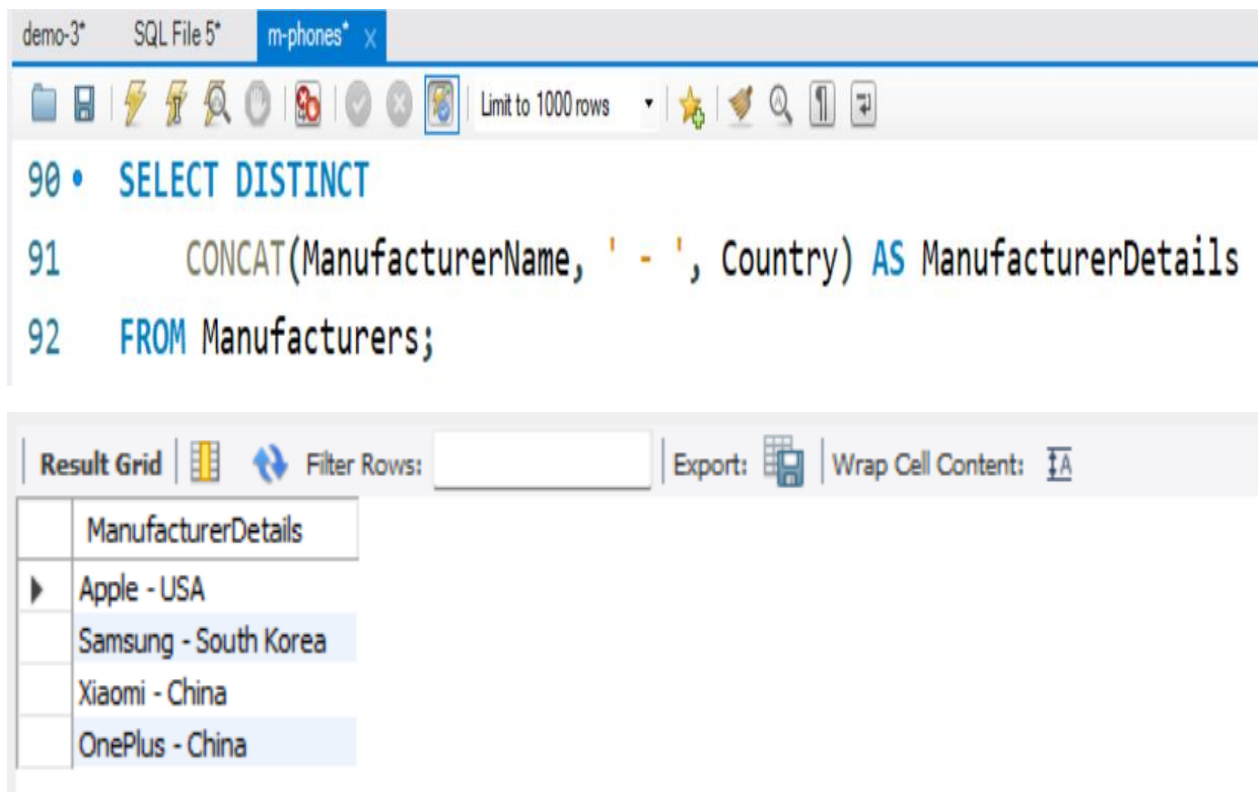
The screenshot shows a SQL IDE window with the following components:

- Tab Bar:** Contains three tabs: "demo-3\*", "SQL File 5\*", and "m-phones\* x".
- Toolbar:** Includes icons for file operations (Save, Open, Print, etc.), a "Limit to 1000 rows" dropdown, and other utility icons.
- SQL Editor:** Contains the query: `94 • SELECT DISTINCT SaleDate  
95 FROM Sales;`
- Result Grid:** Displays the query results in a table with one column, "SaleDate", and two rows: "2024-07-01" and "2024-07-05".

SaleDate
2024-07-01
2024-07-05



## 12. Using Distinct and concat Function?



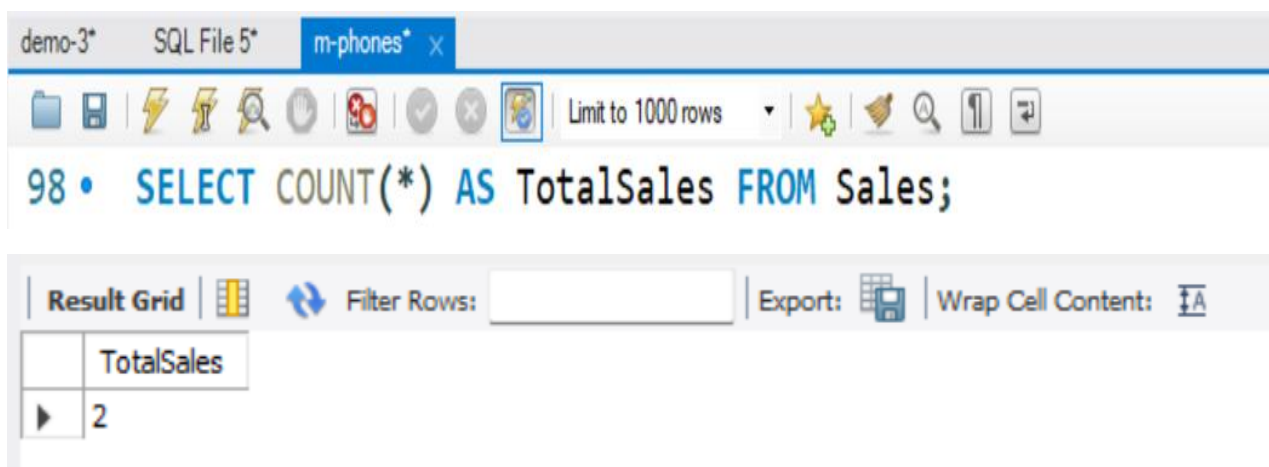
The screenshot shows a SQL IDE interface with a query editor and a result grid. The query editor contains the following SQL code:

```
90 • SELECT DISTINCT
91     CONCAT(ManufacturerName, ' - ', Country) AS ManufacturerDetails
92 FROM Manufacturers;
```

The result grid displays the output of the query, showing a single column named 'ManufacturerDetails' with four rows of data:

ManufacturerDetails
Apple - USA
Samsung - South Korea
Xiaomi - China
OnePlus - China

## 13. Using Count function to find the total?



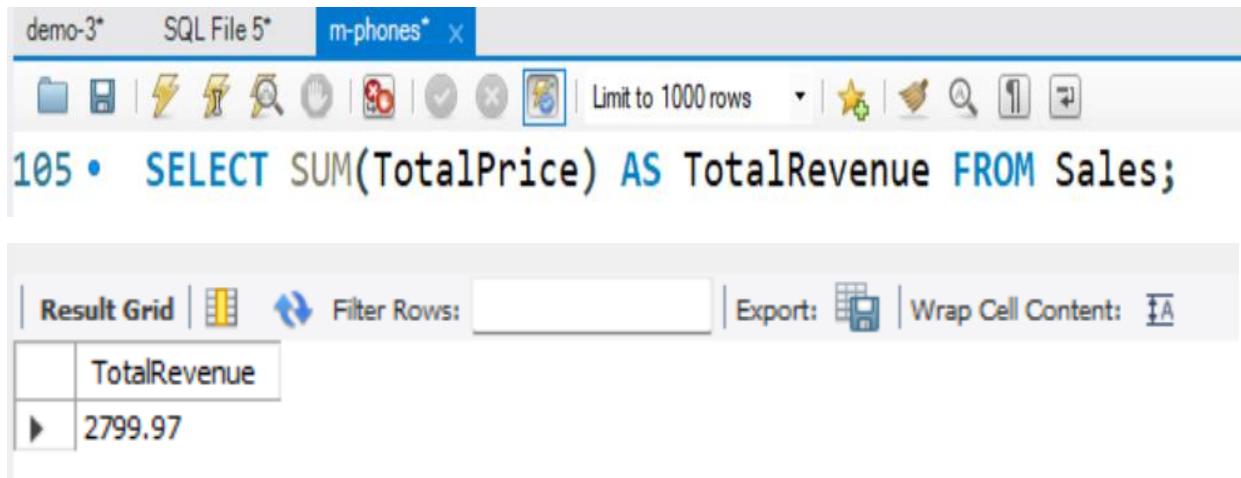
The screenshot shows a SQL IDE interface with a query editor and a result grid. The query editor contains the following SQL code:

```
98 • SELECT COUNT(*) AS TotalSales FROM Sales;
```

The result grid displays the output of the query, showing a single column named 'TotalSales' with one row of data:

TotalSales
2

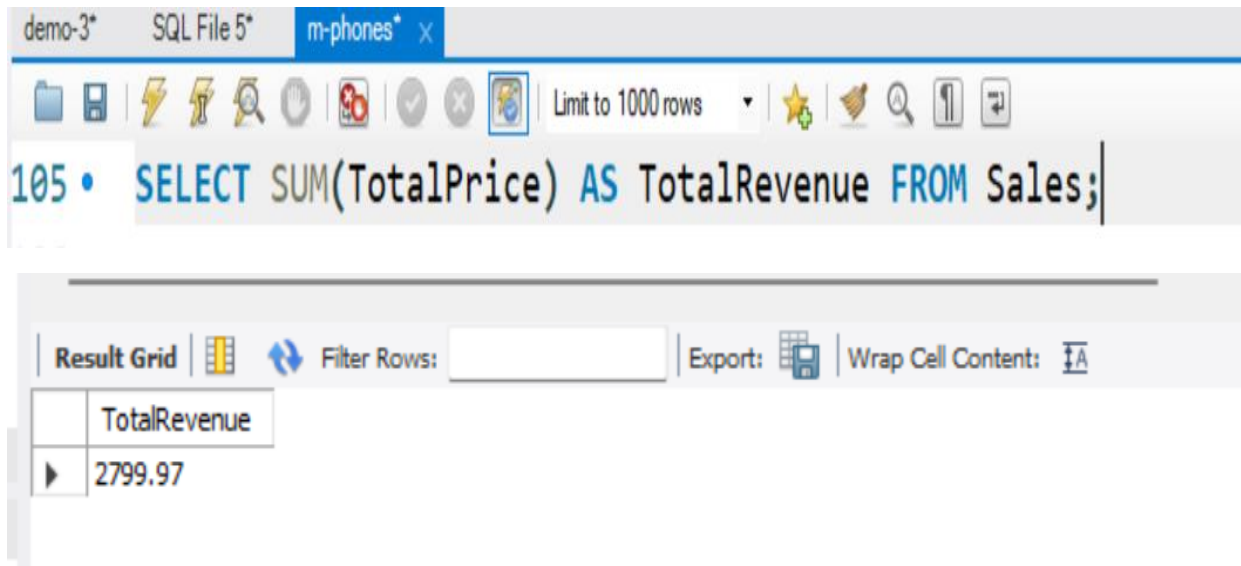
## 14. Using Sum function to find the totalPrice ?



The screenshot shows a SQL IDE window with tabs for 'demo-3\*', 'SQL File 5\*', and 'm-phones\*'. The toolbar includes icons for file operations, a 'Limit to 1000 rows' dropdown, and other utility icons. The SQL editor contains the query: `105 • SELECT SUM(TotalPrice) AS TotalRevenue FROM Sales;`. Below the editor, the 'Result Grid' tab is active, displaying a single row with the column 'TotalRevenue' and the value '2799.97'.

TotalRevenue
2799.97

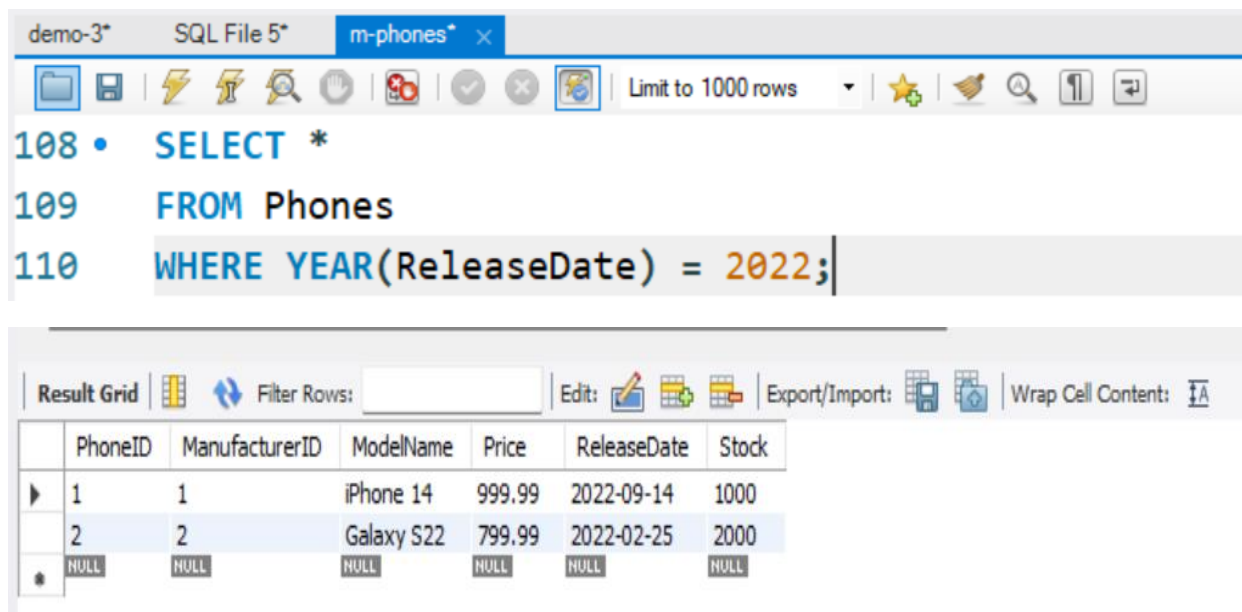
## 15. Using Avg function to find the AveragePrice ?



The screenshot shows the same SQL IDE window as above. The SQL editor contains the query: `105 • SELECT SUM(TotalPrice) AS TotalRevenue FROM Sales;`. The 'Result Grid' tab is active, displaying a single row with the column 'TotalRevenue' and the value '2799.97'.

TotalRevenue
2799.97

16. Using where to find the Phone ReleaseDate 2022 ?



The screenshot shows a SQL IDE interface with a query editor and a result grid. The query editor displays the following SQL query:

```
108 • SELECT *
109 FROM Phones
110 WHERE YEAR(ReleaseDate) = 2022;
```

The result grid shows the following data:

	PhoneID	ManufacturerID	ModelName	Price	ReleaseDate	Stock
▶	1	1	iPhone 14	999.99	2022-09-14	1000
	2	2	Galaxy S22	799.99	2022-02-25	2000
*	NULL	NULL	NULL	NULL	NULL	NULL