

Data Analytics SQL Mini-Project

Insight number 1

-- Reading the whole table

select * from cars24

Query 1 x

Limit to 1000 rows

```
1 select * from cars24;
```

Result Grid

	name	year	selling_price	km_driven	fuel	seller_type	transmission	owner	mileage	engine [CC]	max_power	seats
▶	Hyundai i20 Asta 1.2	2007	550000	2360457	Petrol	Individual	Manual	Second Owner	18.6	1197	81.83	5
	Maruti Wagon R LXI Minor	2010	194000	577414	Petrol	Individual	Manual	Second Owner	18.9	1061	67	5
	Maruti Wagon R VXI BS IV	2011	229999	500000	Petrol	Individual	Manual	Second Owner	18.9	998	67.1	5
	Maruti Wagon R LXI BS IV	2012	220000	360003	Petrol	Individual	Manual	Second Owner	18.9	998	67.1	5
	Hyundai Sonata 2.4 GDI MT	2012	550000	330000	Petrol	Individual	Manual	Second Owner	13.44	2359	198.25	5
	Hyundai Sonata 2.4 GDI MT	2012	500000	330000	Petrol	Individual	Manual	Second Owner	13.44	2359	198.25	5
	Maruti Ertiga BSIV VXI	2017	700000	227000	Petrol	Individual	Manual	First Owner	17.5	1373	91.1	7
	Hyundai i20 1.2 Asta	2011	220000	220000	Petrol	Individual	Manual	Fourth & Above Owner	17	1197	80	5
	Maruti 800 EX	2004	70000	220000	Petrol	Individual	Manual	Second Owner	16.1	796	37	4
	Honda Civic 1.8 S AT	2007	175000	218463	Petrol	Individual	Automatic	First Owner	12.9	1799	130	5
	Hyundai Verna XXI ABS (Pe...	2009	340000	214000	Petrol	Individual	Manual	Second Owner	13.9	1599	103.2	5
	Renault KWID RXT	2015	210000	210000	Petrol	Individual	Manual	Second Owner	25.17	799	53.3	5
	Maruti Alto LX	2000	108000	206000	Petrol	Individual	Manual	Fourth & Above Owner	19.7	796	46.3	5
	Hyundai i10 Magna 1.1L	2010	187000	200400	Petrol	Individual	Manual	Second Owner	19.81	1086	68.05	5
	Ford Fiesta 1.4 Duratec ZXI	2008	136000	200185	Petrol	Individual	Manual	First Owner	16.6	1388	68	5
	Maruti Swift Dzire 1.2 Vxi ...	2010	210000	200000	Petrol	Individual	Manual	First Owner	17.5	1197	85.8	5
	Maruti Zen Estilo VXI BSIV	2010	160000	200000	Petrol	Individual	Manual	First Owner	19	998	67.1	5
	Honda CR-V 2.0L 2WD AT	2006	125000	200000	Petrol	Individual	Automatic	Third Owner	13.1	1997	141.1	5
	Maruti Wagon R LX	2006	65000	198000	Petrol	Individual	Manual	Second Owner	18.9	998	67.1	5

cars24 1 x

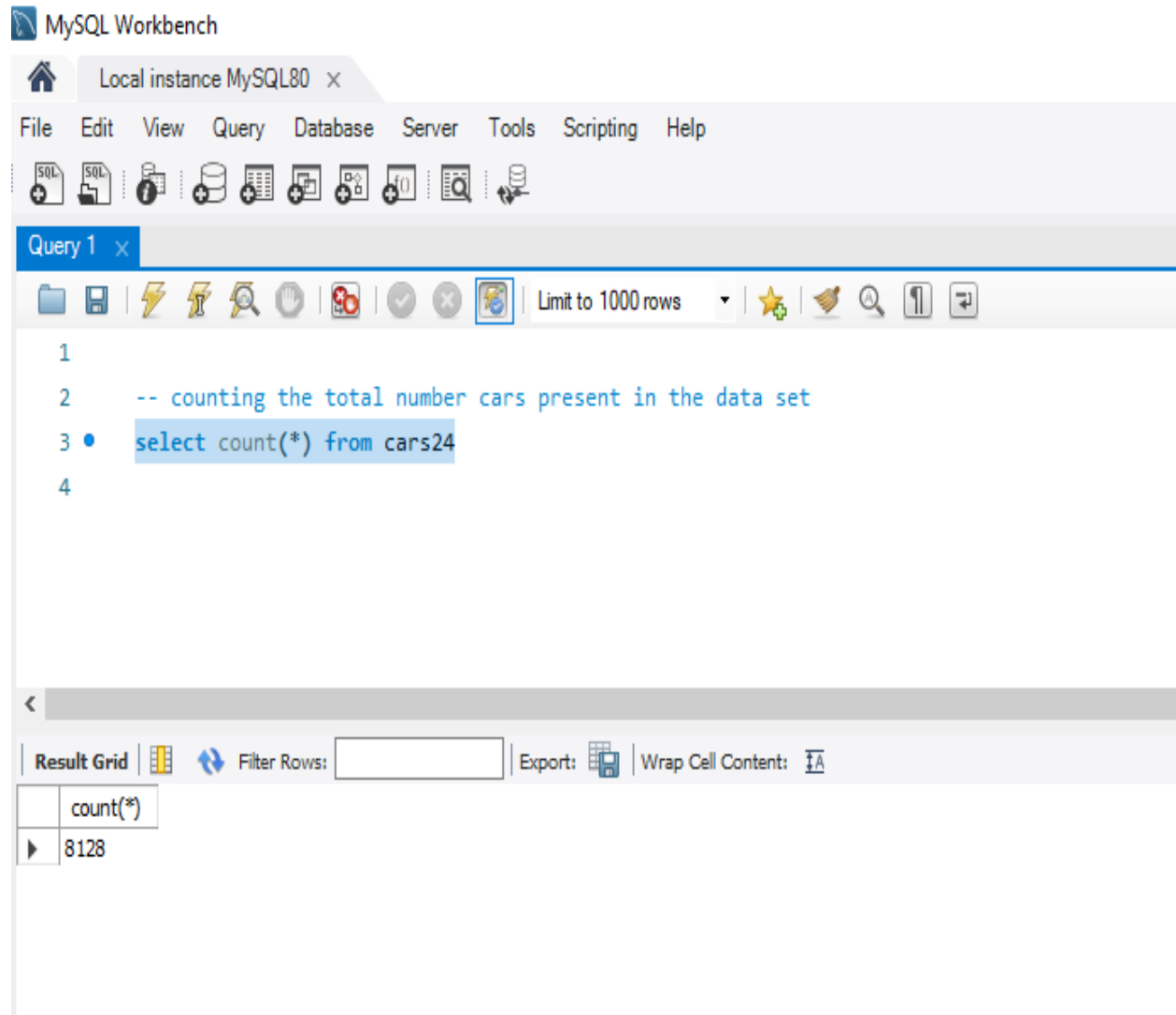
Output

- This query gives an overview of the full dataset of the cars24 table.

Insight number 2

-- counting the total number cars present in the data set

select count (*) from cars24



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a query in the 'Query 1' tab:

```
1
2  -- counting the total number cars present in the data set
3  • select count(*) from cars24
4
```

The query is highlighted in blue. Below the query editor is a toolbar with icons for saving, running, and other actions. The 'Limit to 1000 rows' dropdown is visible. The bottom section shows the 'Result Grid' with the following data:

count(*)
8128

- This query gives an overview of the total number of cars present in the cars24 table.

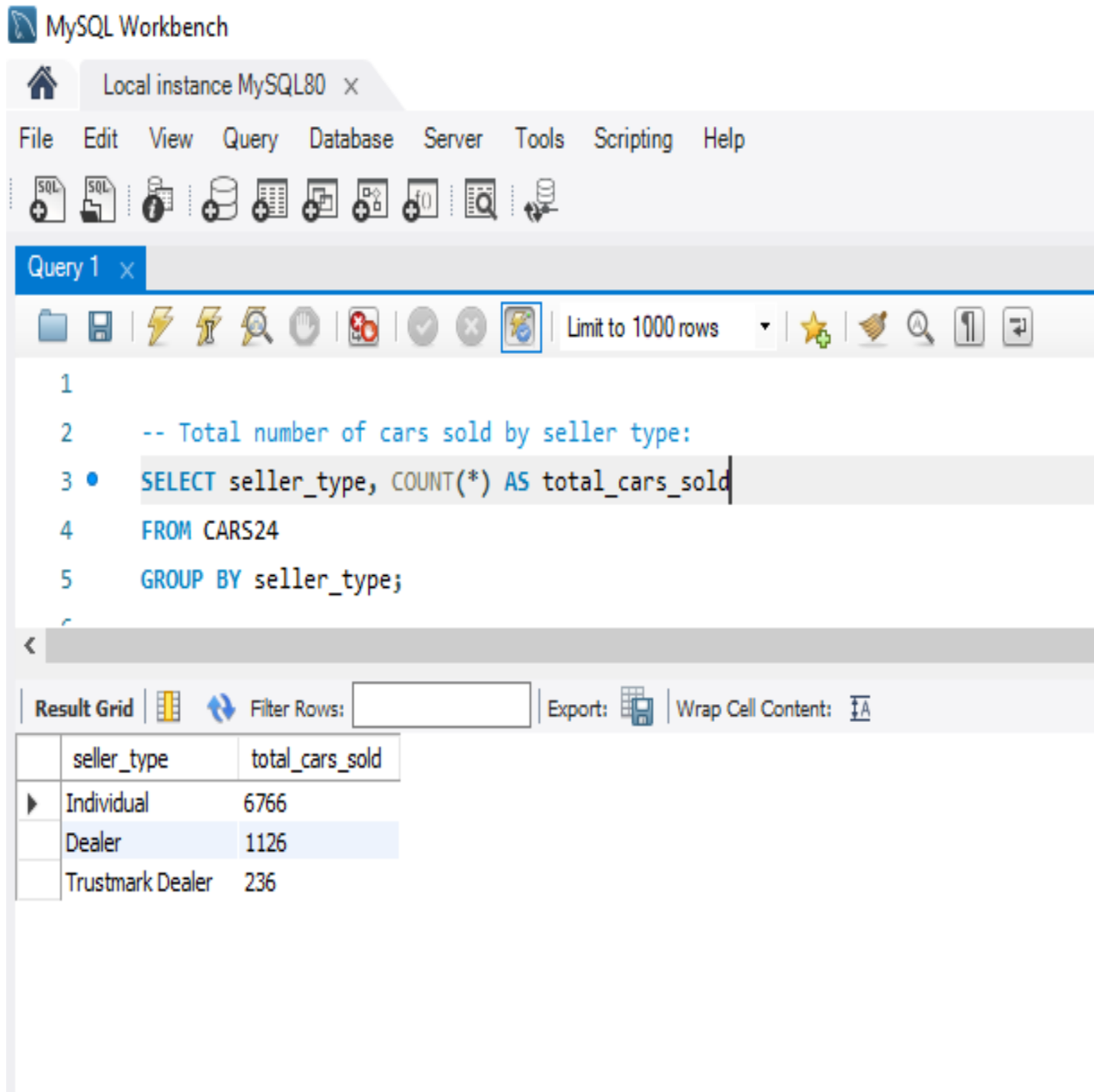
Insight number 3

-- Total number of cars sold by seller type:

```
SELECT seller_type, COUNT (*) AS total_cars_sold
```

```
FROM CARS24
```

```
GROUP BY seller_type;
```



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a query in the 'Query 1' tab. The query is as follows:

```
1
2  -- Total number of cars sold by seller type:
3  • SELECT seller_type, COUNT(*) AS total_cars_sold
4    FROM CARS24
5    GROUP BY seller_type;
```

Below the query editor, the 'Result Grid' is visible, showing the results of the query. The grid has two columns: 'seller_type' and 'total_cars_sold'. The results are as follows:

seller_type	total_cars_sold
Individual	6766
Dealer	1126
Trustmark Dealer	236

- This query gives an overview of the distribution of car sales among different types of sellers.

Insight number 4

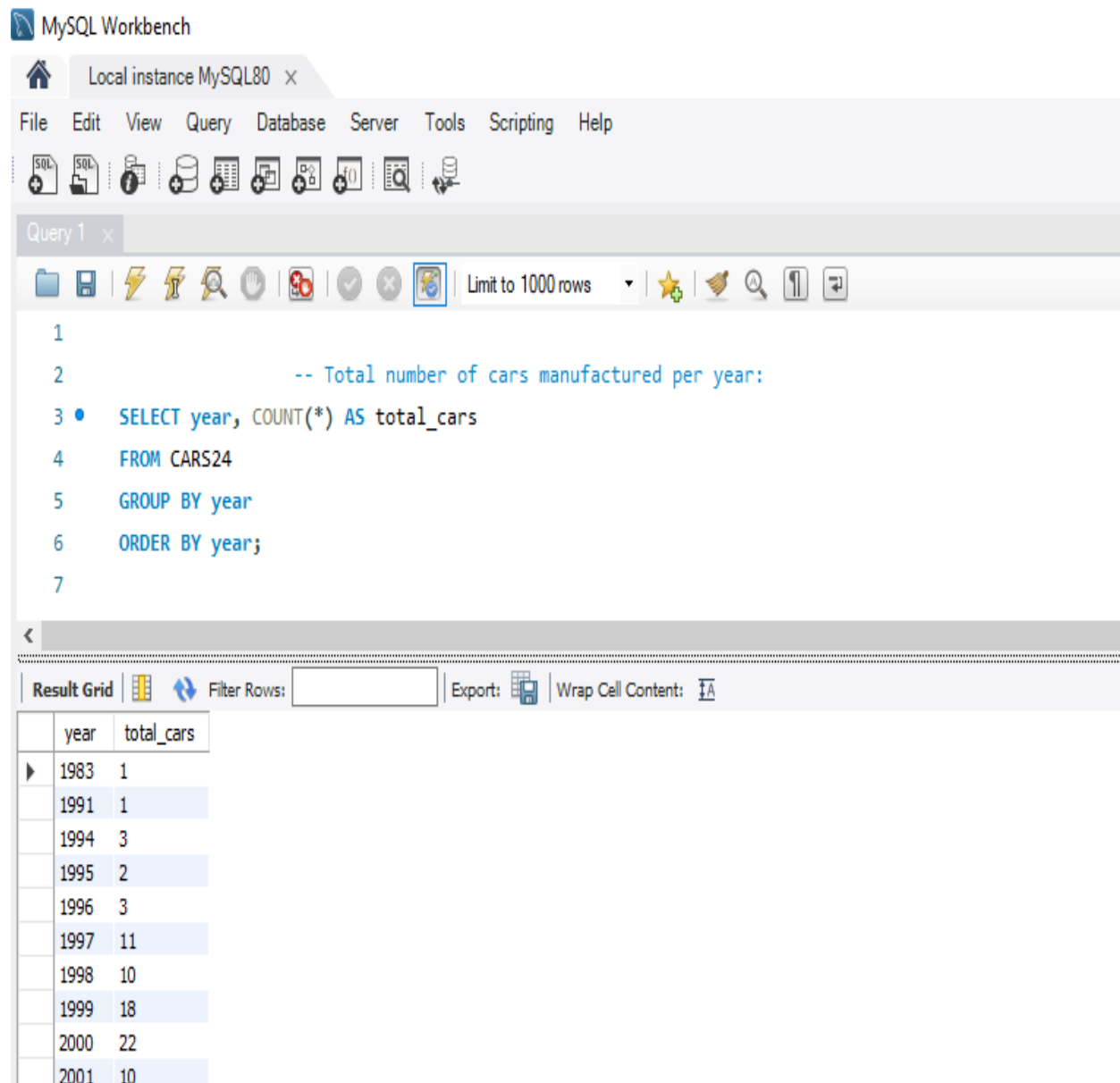
-- Total number of cars manufactured per year:

SELECT year, COUNT (*) AS total_cars

FROM CARS24

GROUP BY year

ORDER BY year;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in the 'Query 1' tab. The query is as follows:

```
1
2      -- Total number of cars manufactured per year:
3 •  SELECT year, COUNT(*) AS total_cars
4     FROM CARS24
5     GROUP BY year
6     ORDER BY year;
7
```

Below the query editor is a toolbar with icons for saving, running, and other actions. The 'Result Grid' tab is selected, showing the results of the query. The result grid has two columns: 'year' and 'total_cars'. The data is as follows:

year	total_cars
1983	1
1991	1
1994	3
1995	2
1996	3
1997	11
1998	10
1999	18
2000	22
2001	10

- This query provides insights into the total number of cars manufactured per year.

Insight number 5

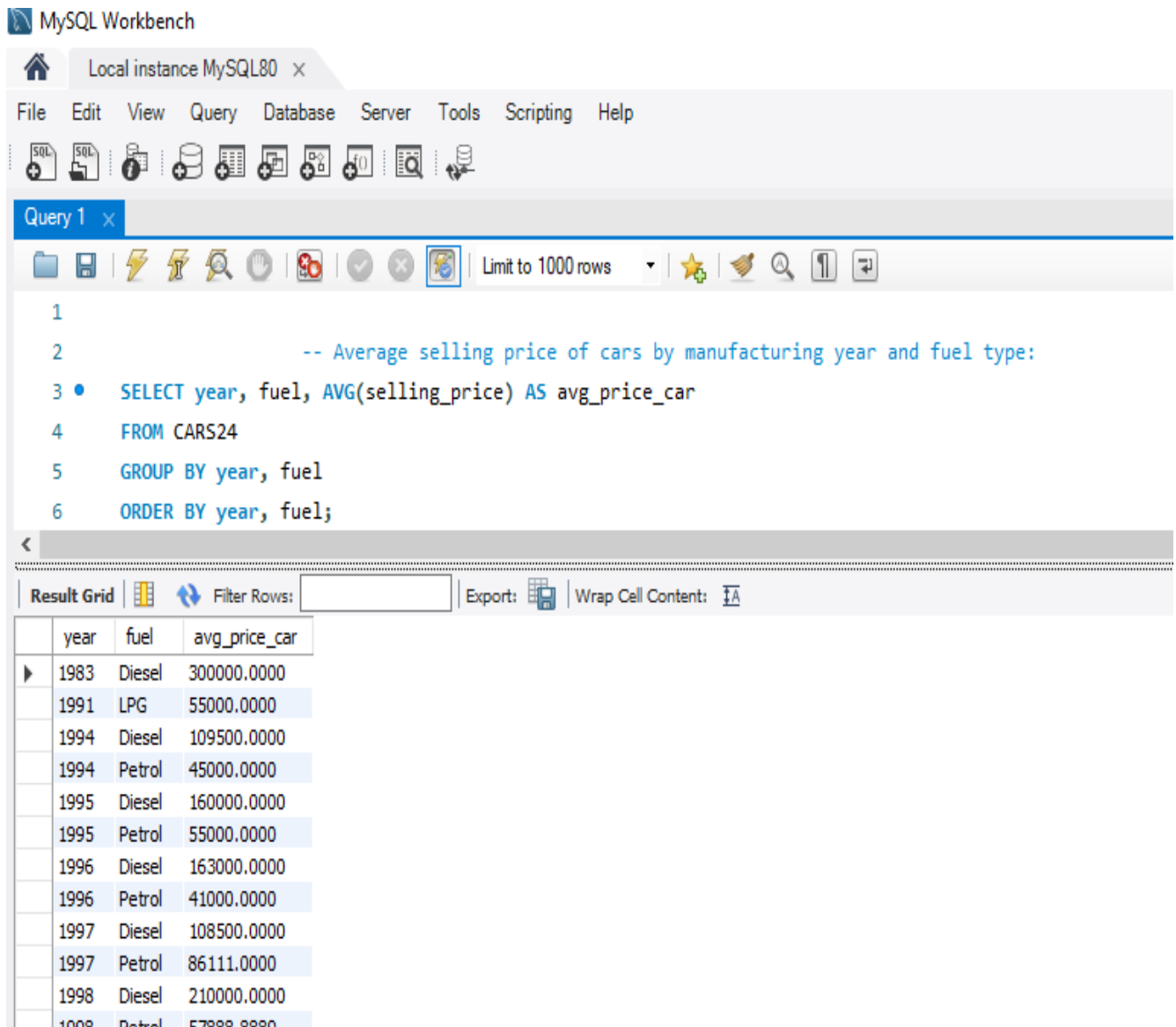
--Average selling price of cars by manufacturing year and fuel type:

SELECT year, fuel, AVG(selling_price) AS avg_price_car

FROM CARS24

GROUP BY year, fuel

ORDER BY year, fuel;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in the 'Query 1' tab. The query is as follows:

```
1
2      -- Average selling price of cars by manufacturing year and fuel type:
3 •  SELECT year, fuel, AVG(selling_price) AS avg_price_car
4     FROM CARS24
5     GROUP BY year, fuel
6     ORDER BY year, fuel;
```

Below the query editor, the 'Result Grid' tab is active, showing the results of the query. The results are displayed in a table with the following columns: year, fuel, and avg_price_car. The table contains 12 rows of data, showing the average selling price for different years and fuel types.

year	fuel	avg_price_car
1983	Diesel	300000.0000
1991	LPG	55000.0000
1994	Diesel	109500.0000
1994	Petrol	45000.0000
1995	Diesel	160000.0000
1995	Petrol	55000.0000
1996	Diesel	163000.0000
1996	Petrol	41000.0000
1997	Diesel	108500.0000
1997	Petrol	86111.0000
1998	Diesel	210000.0000
1998	Petrol	57888.8889

- This query provides insights into the average selling prices of cars considering both fuel type and seller type.

Insight number 6

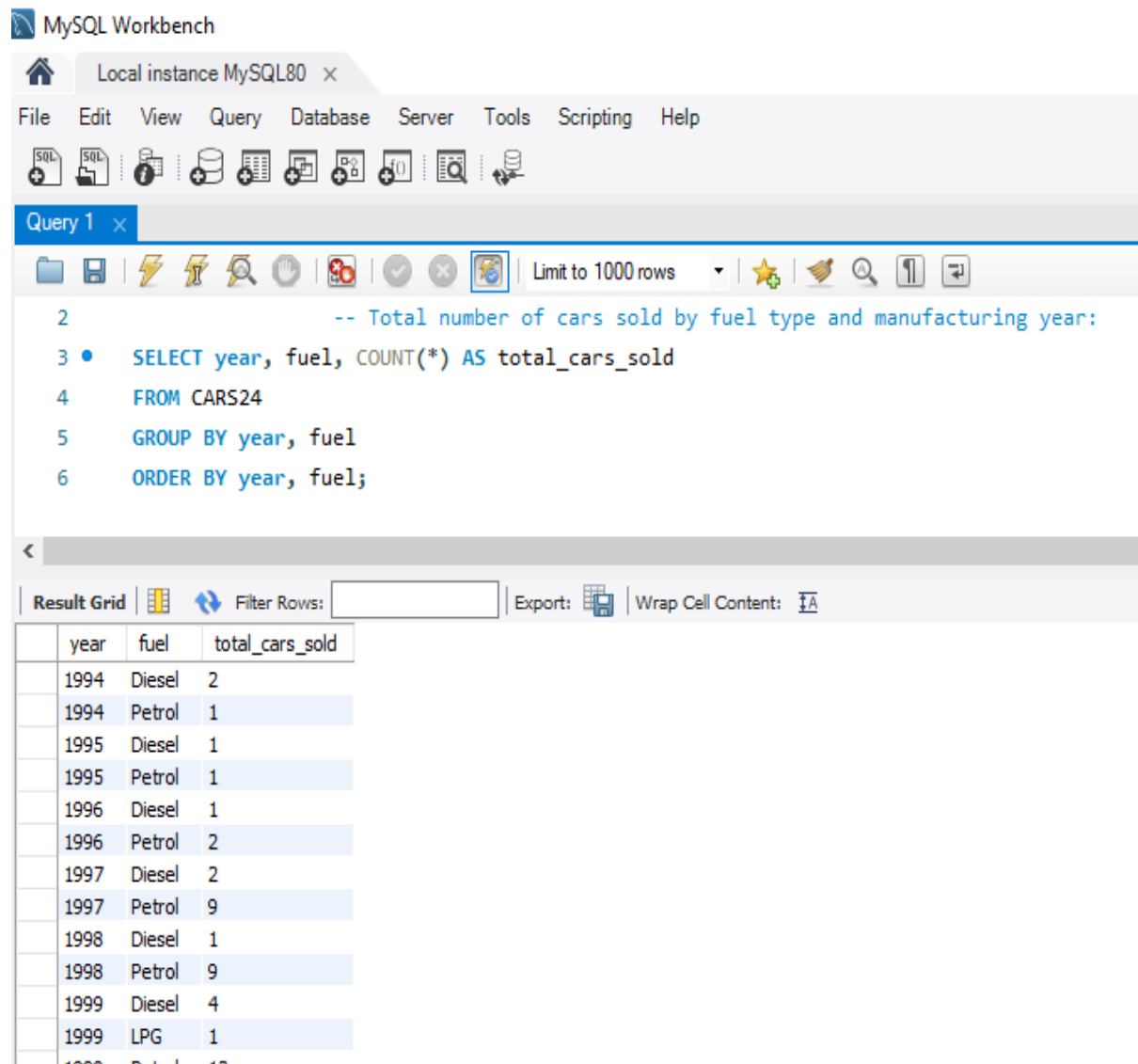
--Total number of cars sold by fuel type and manufacturing year:

SELECT year, fuel, COUNT(*) AS total_cars_sold

FROM CARS24

GROUP BY year, fuel

ORDER BY year, fuel;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in the 'Query 1' tab. The query is as follows:

```
-- Total number of cars sold by fuel type and manufacturing year:
SELECT year, fuel, COUNT(*) AS total_cars_sold
FROM CARS24
GROUP BY year, fuel
ORDER BY year, fuel;
```

Below the query editor, the 'Result Grid' tab is active, showing the results of the query. The results are displayed in a table with three columns: year, fuel, and total_cars_sold. The table contains 14 rows of data, showing the total number of cars sold for each year and fuel type combination.

year	fuel	total_cars_sold
1994	Diesel	2
1994	Petrol	1
1995	Diesel	1
1995	Petrol	1
1996	Diesel	1
1996	Petrol	2
1997	Diesel	2
1997	Petrol	9
1998	Diesel	1
1998	Petrol	9
1999	Diesel	4
1999	LPG	1
1999	Petrol	1

- This query gives a breakdown of the total number of cars sold by both fuel type and manufacturing year.

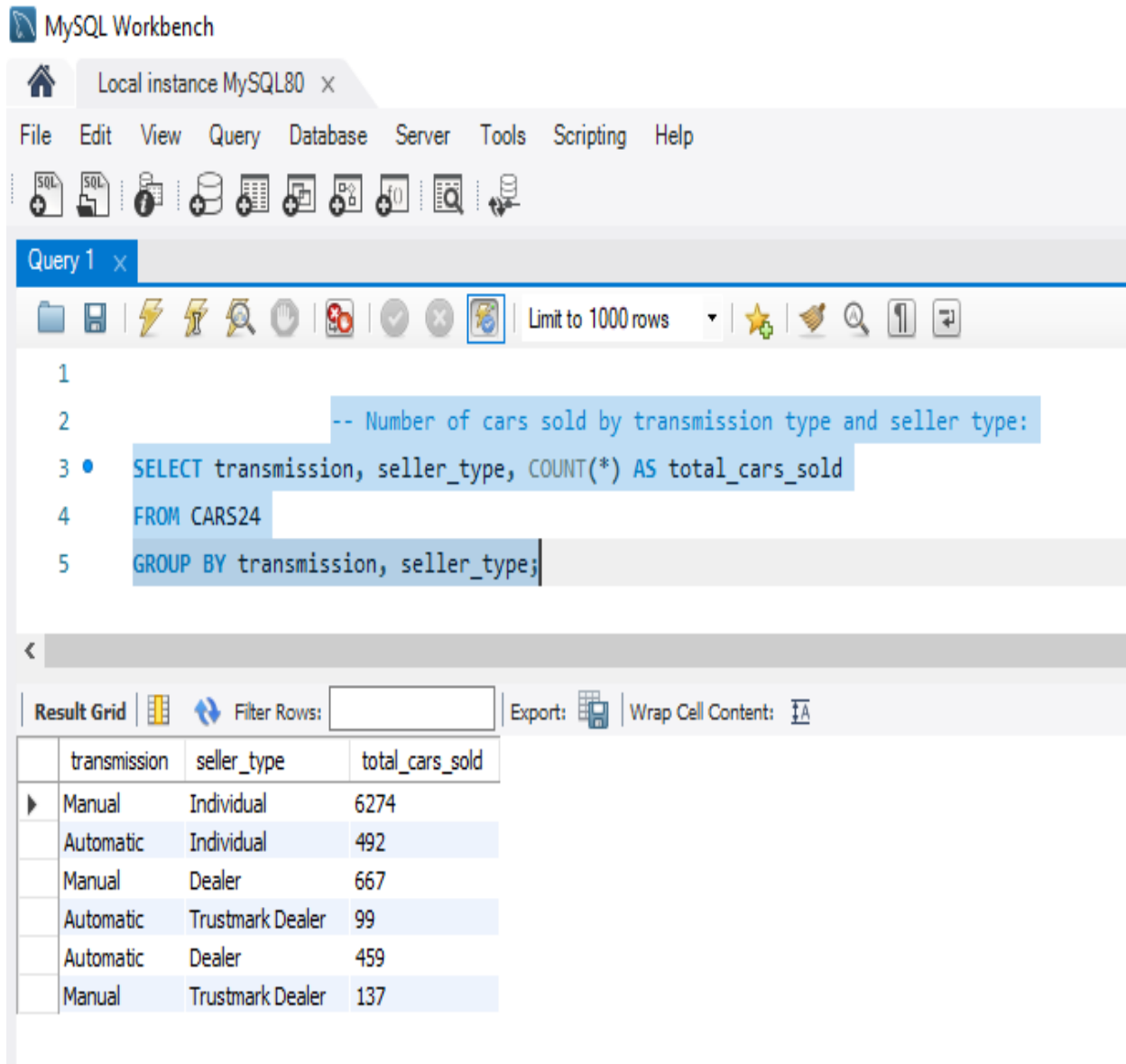
Insight number 7

-- Number of cars sold by transmission type and seller type:

SELECT transmission, seller_type, COUNT(*) AS total_cars_sold

FROM CARS24

GROUP BY transmission, seller_type;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in the 'Query 1' tab. The query is as follows:

```
1
2      -- Number of cars sold by transmission type and seller type:
3 •  SELECT transmission, seller_type, COUNT(*) AS total_cars_sold
4     FROM CARS24
5     GROUP BY transmission, seller_type;
```

Below the query editor, the 'Result Grid' tab is active, showing the results of the query. The results are displayed in a table with three columns: transmission, seller_type, and total_cars_sold. The table contains seven rows of data.

	transmission	seller_type	total_cars_sold
▶	Manual	Individual	6274
	Automatic	Individual	492
	Manual	Dealer	667
	Automatic	Trustmark Dealer	99
	Automatic	Dealer	459
	Manual	Trustmark Dealer	137

- This query gives insights into the distribution of car sales considering both transmission type and seller type.

Insight number 8

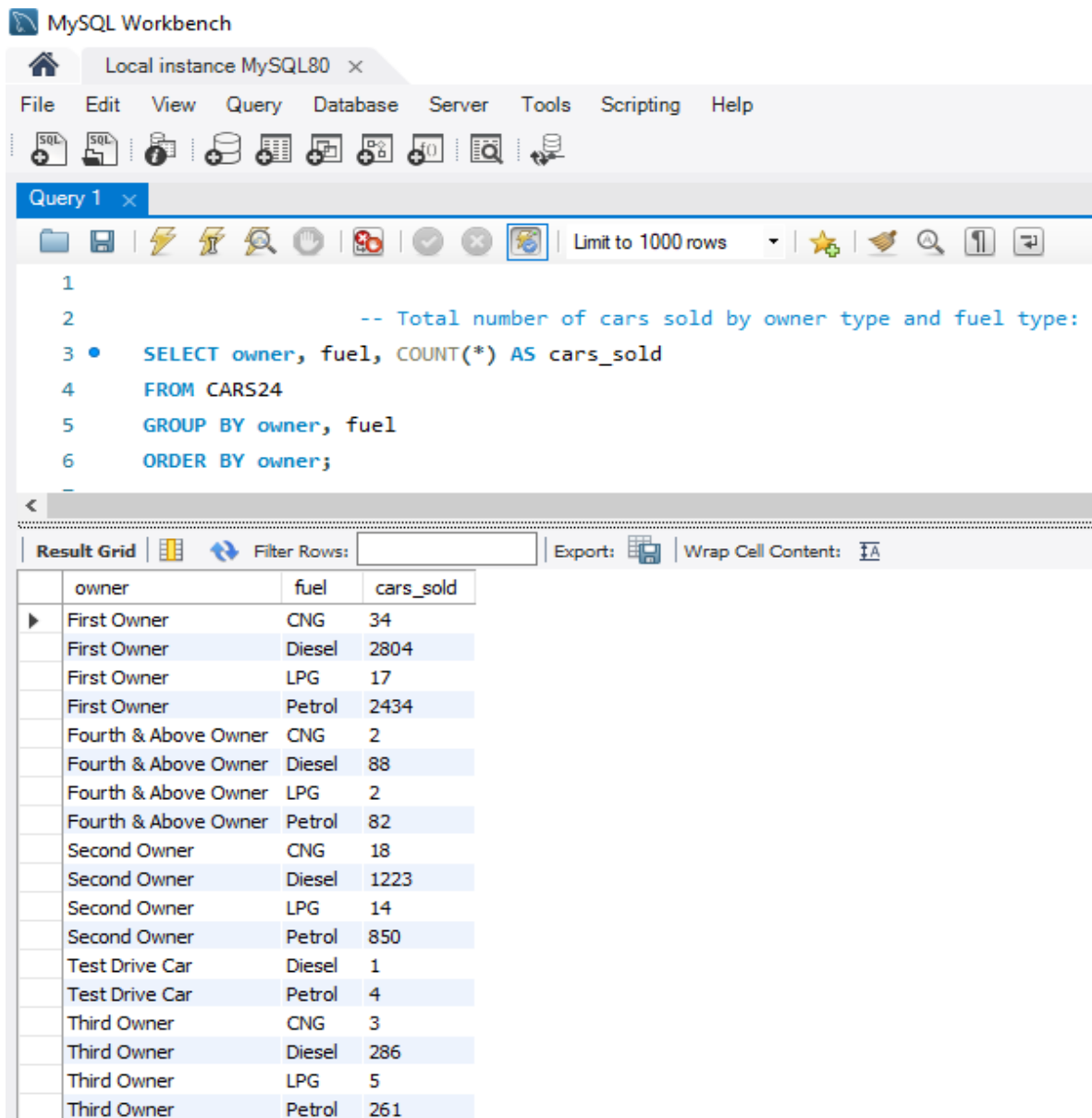
Total number of cars sold by owner type and fuel type:

SELECT owner, fuel, COUNT(*) AS cars_sold

FROM CARS24

GROUP BY owner, fuel

ORDER BY owner;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in the Query Editor:

```
1
2      -- Total number of cars sold by owner type and fuel type:
3 •  SELECT owner, fuel, COUNT(*) AS cars_sold
4     FROM CARS24
5     GROUP BY owner, fuel
6     ORDER BY owner;
```

Below the query editor is the Result Grid, which shows the output of the query. The grid has columns for owner, fuel, and cars_sold. The results are as follows:

owner	fuel	cars_sold
First Owner	CNG	34
First Owner	Diesel	2804
First Owner	LPG	17
First Owner	Petrol	2434
Fourth & Above Owner	CNG	2
Fourth & Above Owner	Diesel	88
Fourth & Above Owner	LPG	2
Fourth & Above Owner	Petrol	82
Second Owner	CNG	18
Second Owner	Diesel	1223
Second Owner	LPG	14
Second Owner	Petrol	850
Test Drive Car	Diesel	1
Test Drive Car	Petrol	4
Third Owner	CNG	3
Third Owner	Diesel	286
Third Owner	LPG	5
Third Owner	Petrol	261

- This query gives a breakdown of the total number of cars sold by both owner type and fuel type.

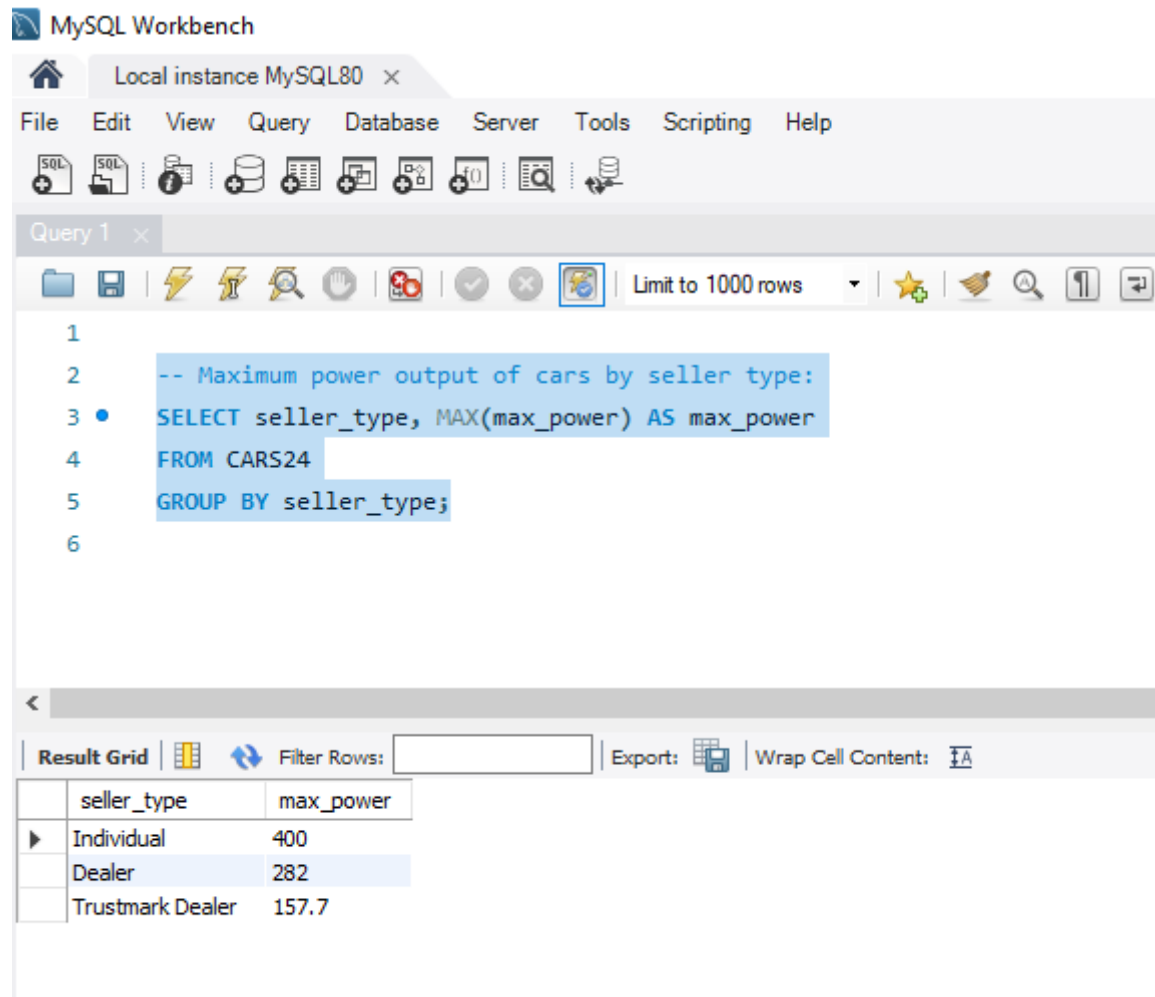
Insight number 9

-- Maximum power output of cars by seller type:

SELECT seller_type, MAX(max_power) AS max_power

FROM CARS24

GROUP BY seller_type;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main area displays a SQL query in a text editor, which is highlighted in blue. The query is as follows:

```
1
2 -- Maximum power output of cars by seller type:
3 • SELECT seller_type, MAX(max_power) AS max_power
4 FROM CARS24
5 GROUP BY seller_type;
6
```

Below the query editor, the 'Result Grid' is visible, showing the output of the query. The grid has two columns: 'seller_type' and 'max_power'. The results are as follows:

seller_type	max_power
Individual	400
Dealer	282
Trustmark Dealer	157.7

- This query helps in understanding the maximum power output of cars sold by different types of sellers.

Insight number 10

--Top 5 most common car models sold:

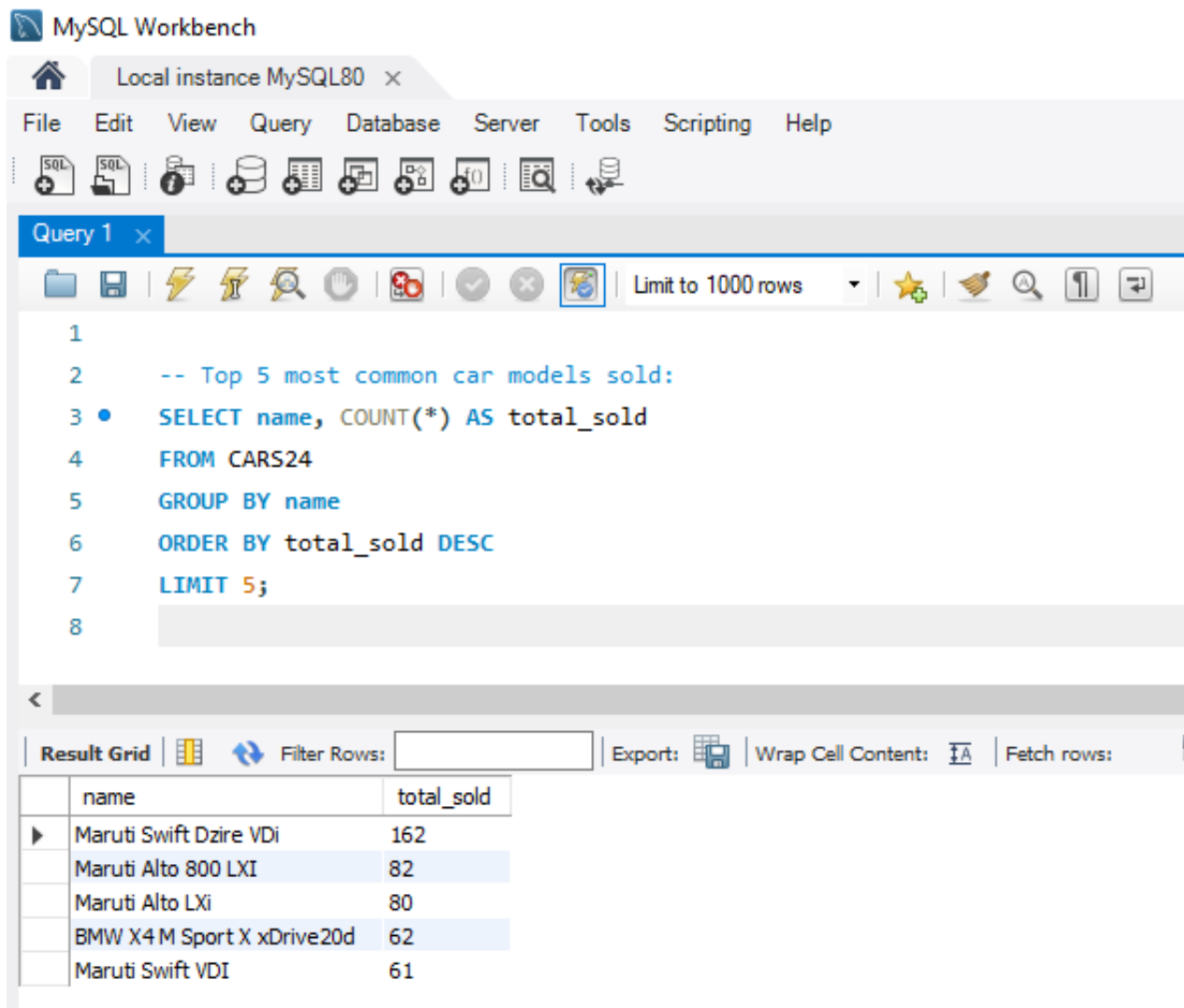
SELECT name, COUNT (*) AS total_sold

FROM CARS24

GROUP BY name

ORDER BY total_sold DESC

LIMIT 5;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a query in the 'Query 1' tab. The query is as follows:

```
1
2  -- Top 5 most common car models sold:
3  • SELECT name, COUNT(*) AS total_sold
4    FROM CARS24
5    GROUP BY name
6    ORDER BY total_sold DESC
7    LIMIT 5;
8
```

Below the query editor, the 'Result Grid' is visible, showing the results of the query. The grid has two columns: 'name' and 'total_sold'. The results are as follows:

name	total_sold
Maruti Swift Dzire VDi	162
Maruti Alto 800 LXI	82
Maruti Alto LXi	80
BMW X4 M Sport X xDrive20d	62
Maruti Swift VDI	61

- This query lists the top 5 most common car models sold based on the number of units.

Insight number 11

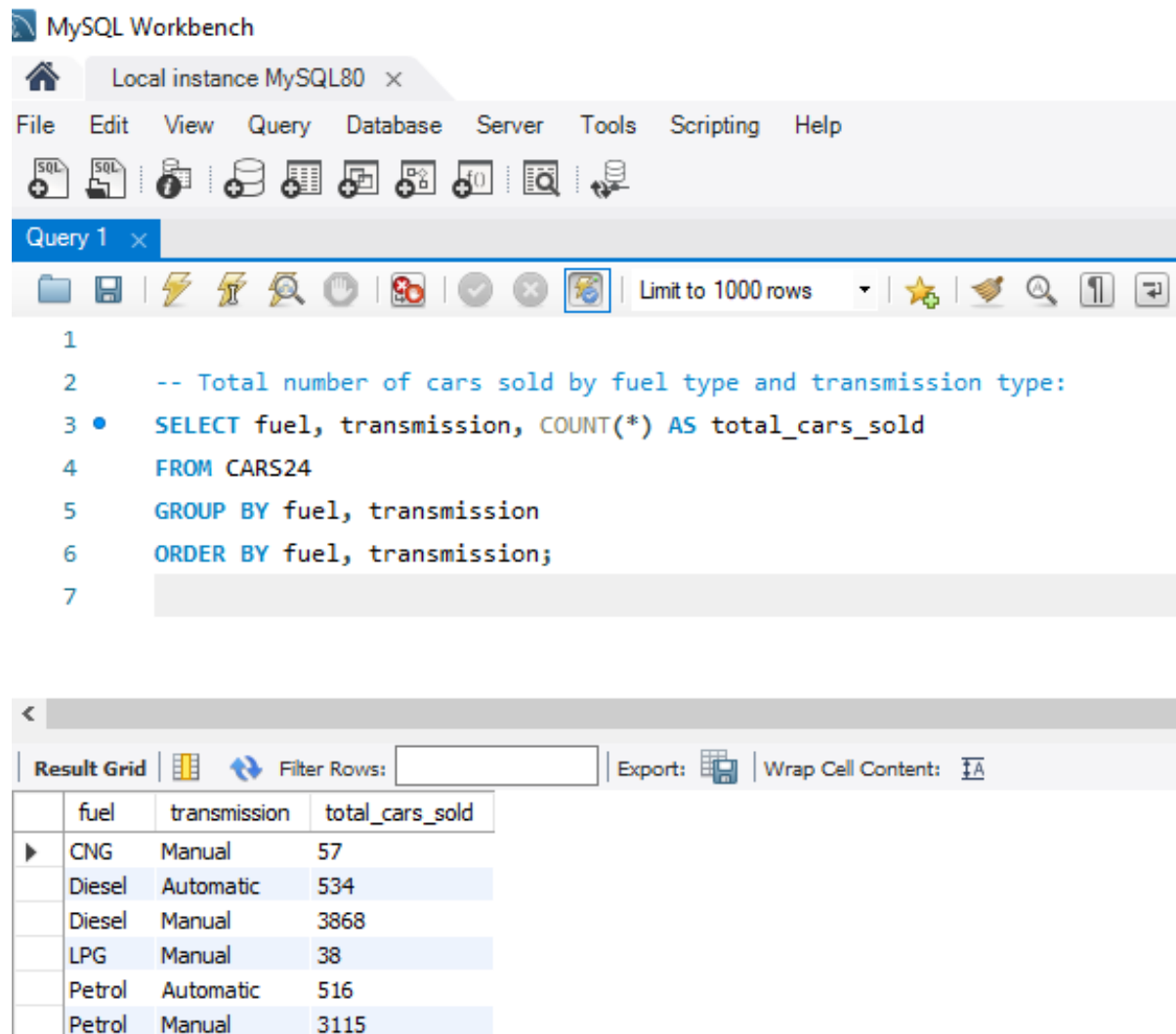
-- Total number of cars sold by fuel type and transmission type:

SELECT fuel, transmission, **COUNT** (*) **AS** total_cars_sold

FROM CARS24

GROUP BY fuel, transmission

ORDER BY fuel, transmission;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in the Query Editor, which is highlighted in blue. The query is as follows:

```
1
2  -- Total number of cars sold by fuel type and transmission type:
3  • SELECT fuel, transmission, COUNT(*) AS total_cars_sold
4    FROM CARS24
5    GROUP BY fuel, transmission
6    ORDER BY fuel, transmission;
7
```

Below the query editor, the Result Grid is visible. It shows the results of the query in a table format. The table has four columns: fuel, transmission, and total_cars_sold. The results are as follows:

fuel	transmission	total_cars_sold
CNG	Manual	57
Diesel	Automatic	534
Diesel	Manual	3868
LPG	Manual	38
Petrol	Automatic	516
Petrol	Manual	3115

- This query gives a breakdown of the total number of cars sold by both fuel type and transmission type.

Insight number 12

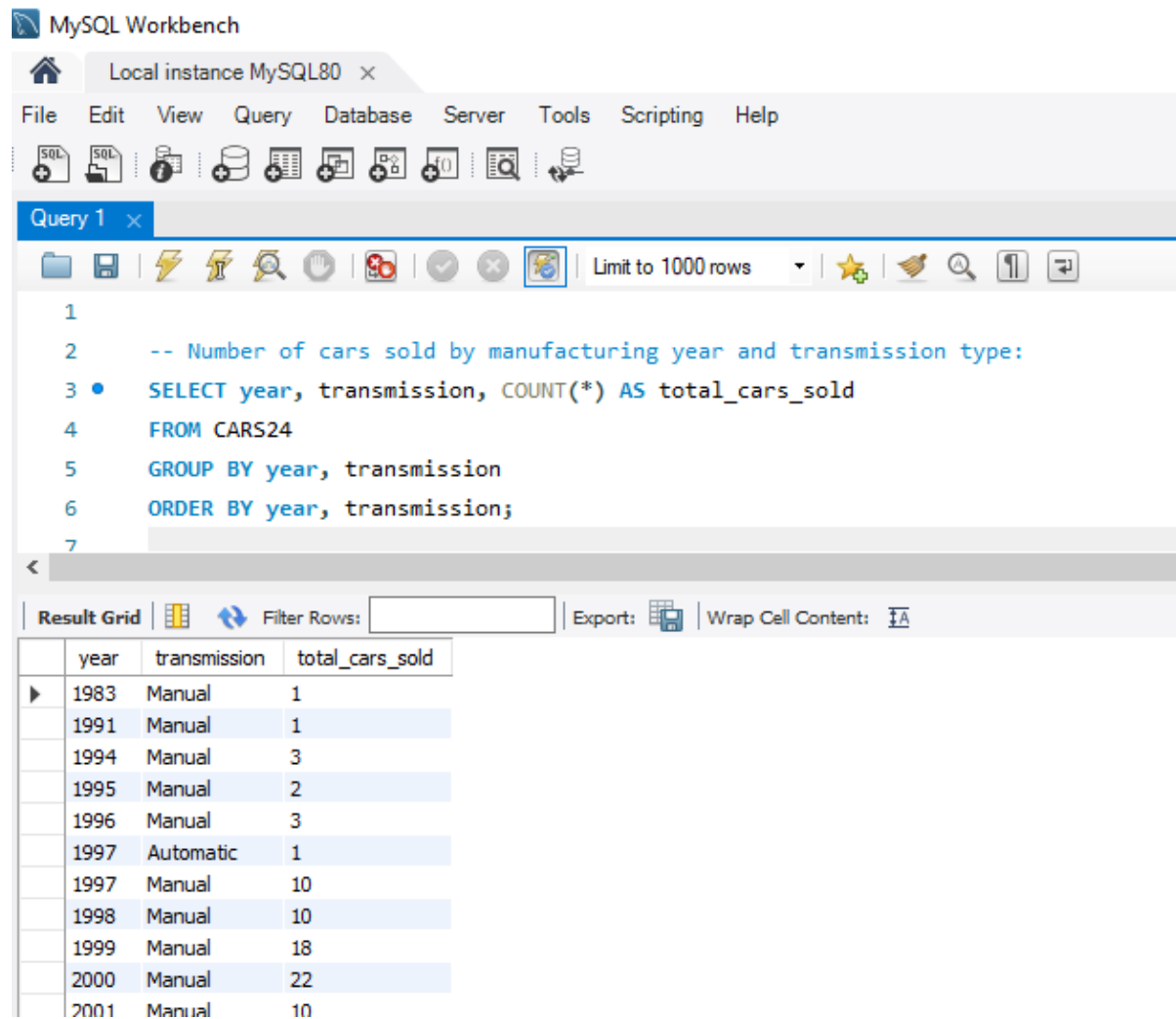
-- Number of cars sold by manufacturing year and transmission type:

SELECT year, transmission, COUNT(*) AS total_cars_sold

FROM CARS24

GROUP BY year, transmission

ORDER BY year, transmission;



The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the menu is a toolbar with various icons. The main window displays a SQL query in a text editor, which is the same query as shown in the previous blocks. Below the query editor, the 'Result Grid' tab is active, showing the results of the query in a table format. The table has three columns: 'year', 'transmission', and 'total_cars_sold'. The data is sorted by year and then by transmission type.

year	transmission	total_cars_sold
1983	Manual	1
1991	Manual	1
1994	Manual	3
1995	Manual	2
1996	Manual	3
1997	Automatic	1
1997	Manual	10
1998	Manual	10
1999	Manual	18
2000	Manual	22
2001	Manual	10

- This query provides insights into the distribution of car sales considering both manufacturing year and transmission type.