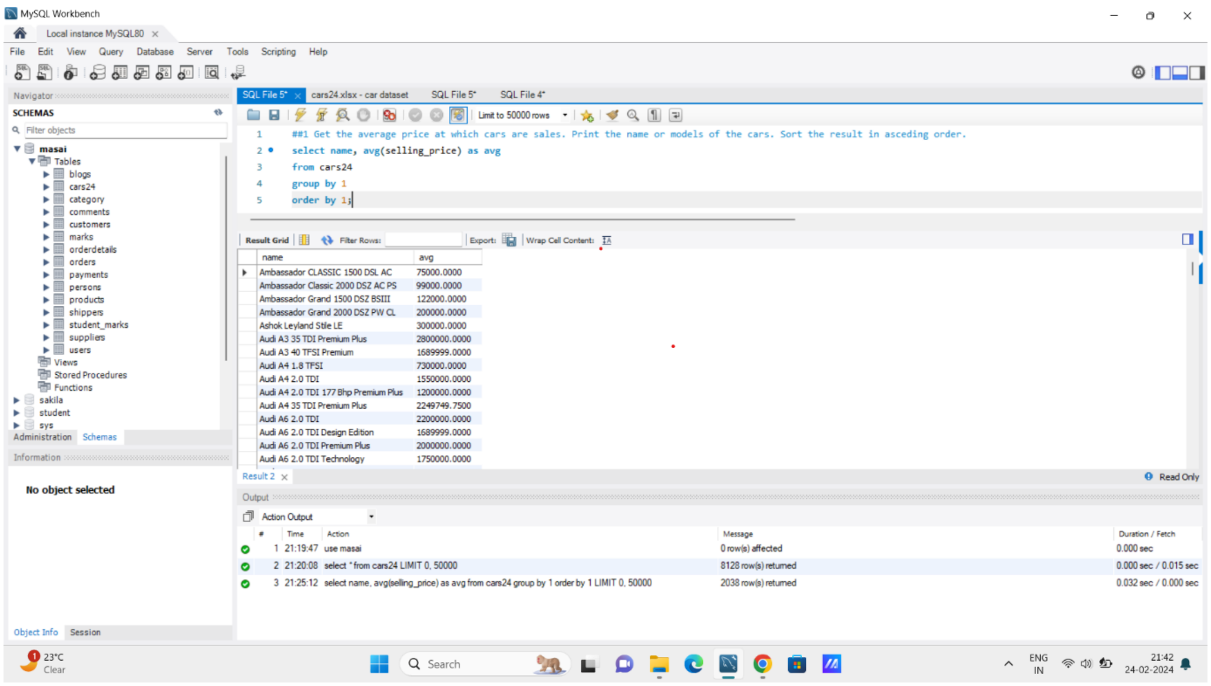
Data Analytics SQL Mini-Project

Insight no. 1 -

--Get the average price at which cars are sales.
Print the name or models of the cars.
Sort the result in ascending order.



```
##1 Get the average price at which cars are sales. Print the name or models of the cars. Sort the result in asceding order.
select name, avg(selling_price) as avg
from cars24
group by 1
order by 1;
```

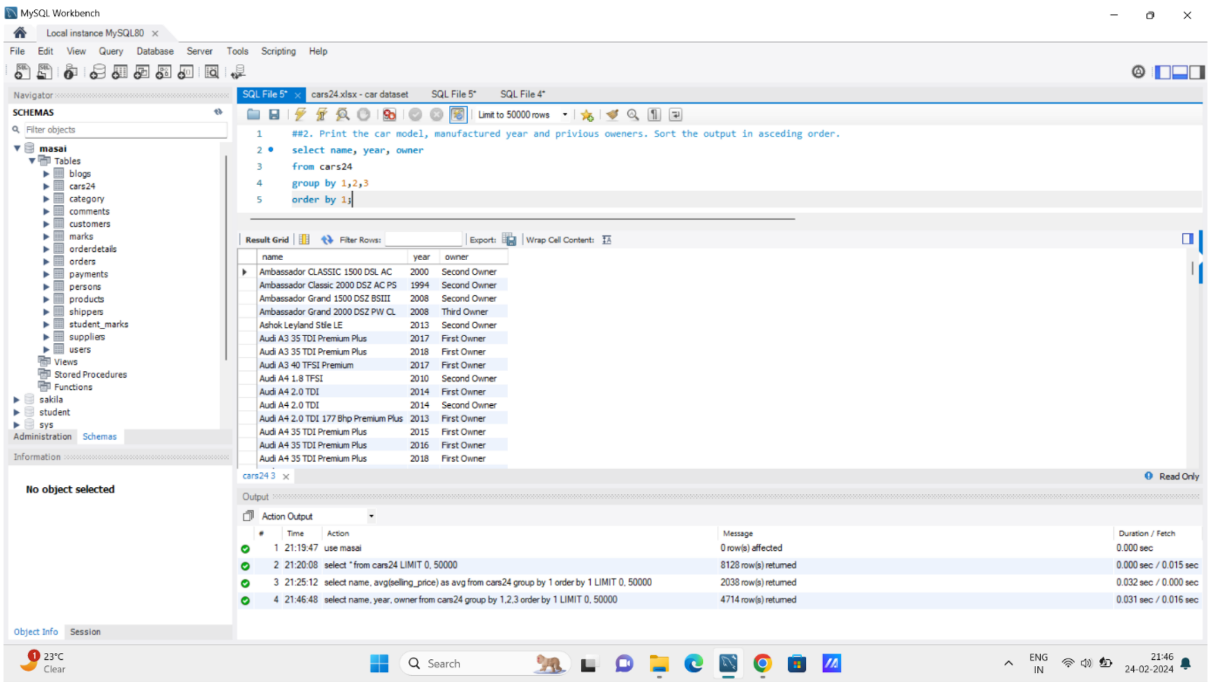
name	avg
Ambassador CLASSIC 1500 DSL AC	75000.0000
Ambassador Classic 2000 DSZ AC PS	99000.0000
Ambassador Grand 1500 DSZ BSIII	122000.0000
Ambassador Grand 2000 DSZ PW CL	200000.0000
Ashok Leyland Stile LE	300000.0000
Audi A3 35 TDI Premium Plus	2800000.0000
Audi A3 40 TFSI Premium	1689999.0000
Audi A4 1.8 TFSI	730000.0000
Audi A4 2.0 TDI	1550000.0000
Audi A4 2.0 TDI 177 Bhp Premium Plus	1200000.0000
Audi A4 35 TDI Premium Plus	2249749.7500
Audi A6 2.0 TDI	2200000.0000
Audi A6 2.0 TDI Design Edition	1689999.0000
Audi A6 2.0 TDI Premium Plus	2000000.0000
Audi A6 2.0 TDI Technology	1750000.0000

```
#  Time      Action                                                                             Message              Duration / Fetch
1  21:19:47  use masai                                                                          0 row(s) affected    0.000 sec
2  21:20:08  select * from cars24 LIMIT 0, 50000                                                8128 row(s) returned 0.000 sec / 0.015 sec
3  21:25:12  select name, avg(selling_price) as avg from cars24 group by 1 order by 1 LIMIT 0, 50000  2038 row(s) returned 0.032 sec / 0.000 sec
```

Insight no. 2 -

--Print the car model, manufactured year and previous owners.

Sort the output in ascending order.



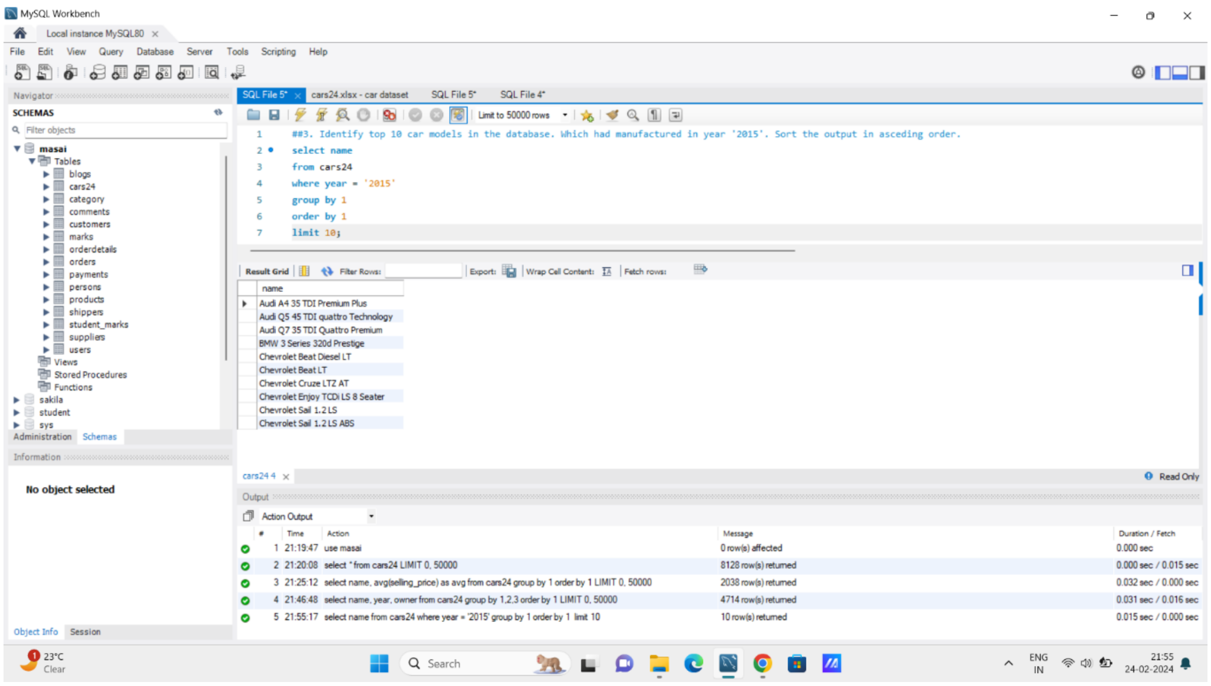
```sql
##2. Print the car model, manufactured year and privious oweners. Sort the output in asceding order.
select name, year, owner
from cars24
group by 1,2,3
order by 1;
```

name	year	owner
Ambassador CLASSIC 1500 DSL AC	2000	Second Owner
Ambassador Classic 2000 DSZ AC PS	1994	Second Owner
Ambassador Grand 1500 DSZ BSIII	2008	Second Owner
Ambassador Grand 2000 DSZ PW CL	2008	Third Owner
Ashok Leyland Stile LE	2013	Second Owner
Audi A3 35 TDI Premium Plus	2017	First Owner
Audi A3 35 TDI Premium Plus	2018	First Owner
Audi A3 40 TFSI Premium	2017	First Owner
Audi A4 1.8 TFSI	2010	Second Owner
Audi A4 2.0 TDI	2014	First Owner
Audi A4 2.0 TDI	2014	Second Owner
Audi A4 2.0 TDI 177 Bhp Premium Plus	2013	First Owner
Audi A4 35 TDI Premium Plus	2015	First Owner
Audi A4 35 TDI Premium Plus	2016	First Owner
Audi A4 35 TDI Premium Plus	2018	First Owner

```
#  Time      Action                                                                         Message                Duration / Fetch
1  21:19:47  use masai                                                                      0 row(s) affected      0.000 sec
2  21:20:08  select * from cars24 LIMIT 0, 50000                                            8128 row(s) returned   0.000 sec / 0.015 sec
3  21:25:12  select name, avg(selling_price) as avg from cars24 group by 1 order by 1 LIMIT 0, 50000   2038 row(s) returned   0.032 sec / 0.000 sec
4  21:46:48  select name, year, owner from cars24 group by 1,2,3 order by 1 LIMIT 0, 50000  4714 row(s) returned   0.031 sec / 0.016 sec
```

Insight no. 3 -

--Identify top 10 car models in the database, which had manufactured in Year ‘2015’. Sort the output in ascending order.



```sql
##3. Identify top 10 car models in the database. Which had manufactured in year '2015'. Sort the output in asceding order.
select name
from cars24
where year = '2015'
group by 1
order by 1
limit 10;
```

name
Audi A4 35 TDI Premium Plus
Audi Q5 45 TDI quattro Technology
Audi Q7 35 TDI Quattro Premium
BMW 3 Series 320d Prestige
Chevrolet Beat Diesel LT
Chevrolet Beat LT
Chevrolet Cruze LTZ AT
Chevrolet Enjoy TCDi LS 8 Seater
Chevrolet Sail 1.2 LS
Chevrolet Sail 1.2 LS ABS

#	Time	Action	Message	Duration / Fetch
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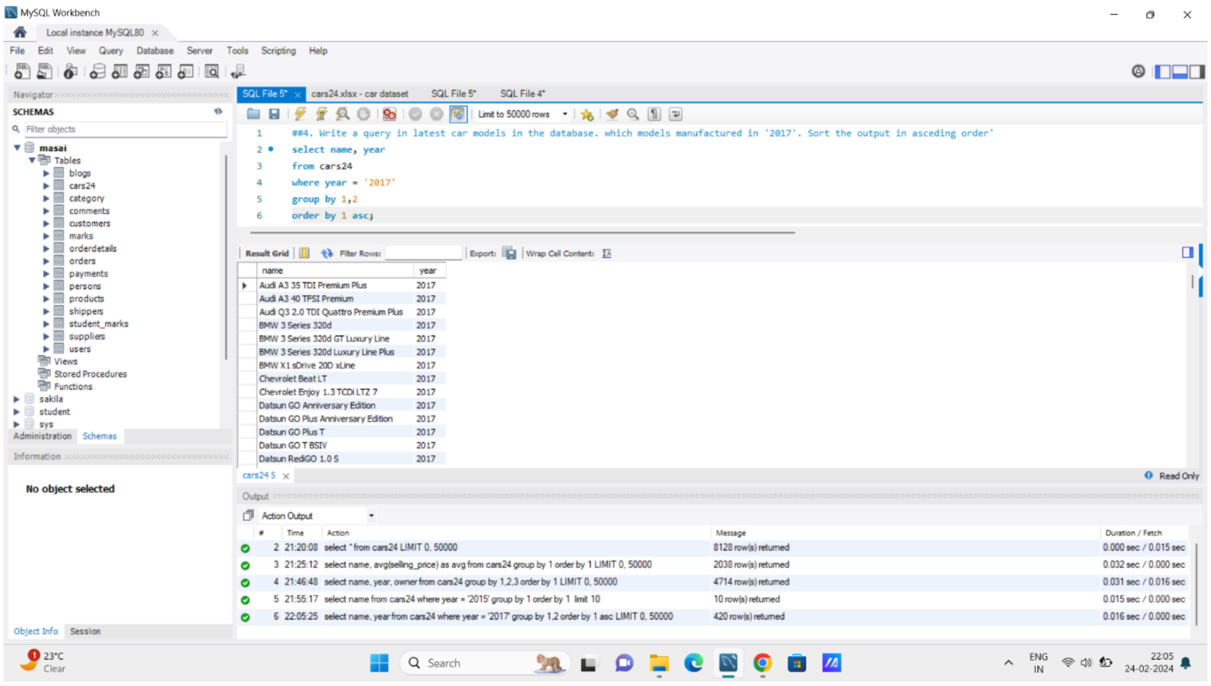
2	21:20:08	select * from cars24 LIMIT 0, 50000	8128 row(s) returned	0.000 sec / 0.015 sec
3	21:25:12	select name, avg(selling_price) as avg from cars24 group by 1 order by 1 LIMIT 0, 50000	2038 row(s) returned	0.032 sec / 0.000 sec
4	21:46:48	select name, year, owner from cars24 group by 1,2,3 order by 1 LIMIT 0, 50000	4714 row(s) returned	0.031 sec / 0.016 sec
5	21:55:17	select name from cars24 where year = '2015' group by 1 order by 1 limit 10	10 row(s) returned	0.015 sec / 0.000 sec

Insight no. 4 -

--Write a query in latest car models in the database. Which model manufactured in ‘2017’. Sort the output in ascending order.



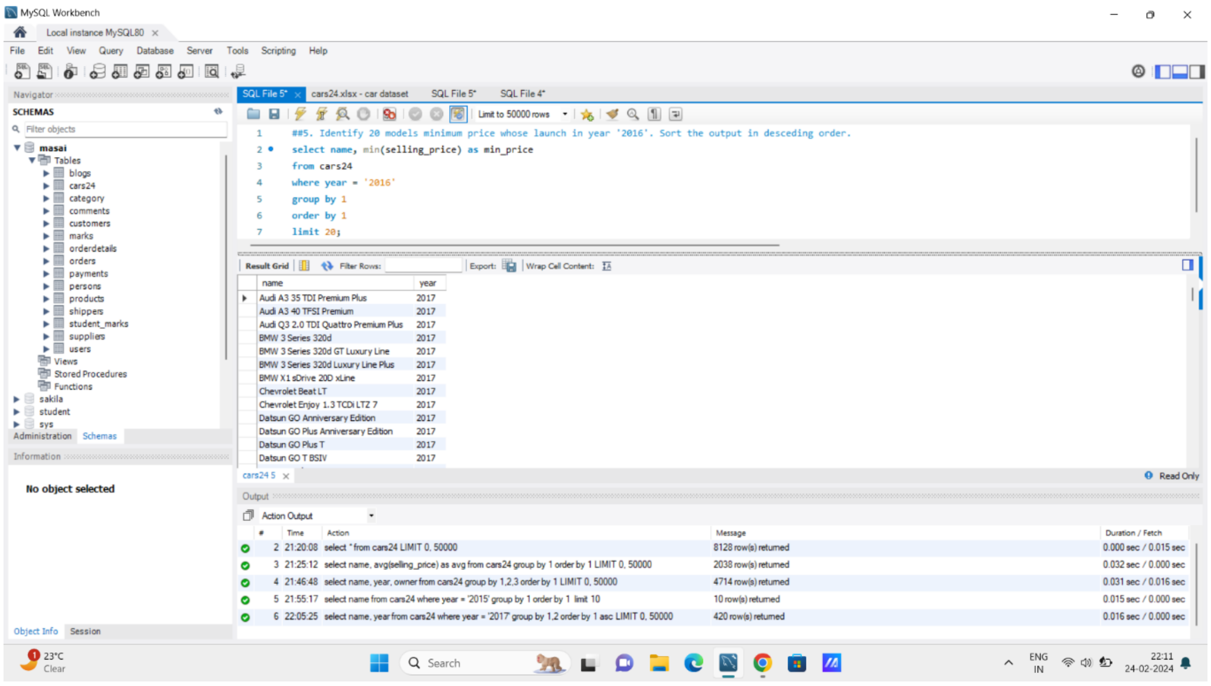
```sql
##4. Write a query in latest car models in the database. which models manufactured in '2017'. Sort the output in asceding order'
select name, year
from cars24
where year = '2017'
group by 1,2
order by 1 asc;
```

name	year
Audi A3 35 TDI Premium Plus	2017
Audi A3 40 TFSI Premium	2017
Audi Q3 2.0 TDI Quattro Premium Plus	2017
BMW 3 Series 320d	2017
BMW 3 Series 320d GT Luxury Line	2017
BMW 3 Series 320d Luxury Line Plus	2017
BMW X1 sDrive 20D xLine	2017
Chevrolet Beat LT	2017
Chevrolet Enjoy 1.3 TCDi LTZ 7	2017
Datsun GO Anniversary Edition	2017
Datsun GO Plus Anniversary Edition	2017
Datsun GO Plus T	2017
Datsun GO T BSIV	2017
Datsun RediGO 1.0 S	2017

#	Time	Action	Message	Duration / Fetch
2	21:20:08	select * from cars24 LIMIT 0, 50000	8128 row(s) returned	0.000 sec / 0.015 sec
3	21:25:12	select name, avg(selling_price) as avg from cars24 group by 1 order by 1 LIMIT 0, 50000	2038 row(s) returned	0.032 sec / 0.000 sec
4	21:46:48	select name, year, owner from cars24 group by 1,2,3 order by 1 LIMIT 0, 50000	4714 row(s) returned	0.031 sec / 0.016 sec
5	21:55:17	select name from cars24 where year = '2015' group by 1 order by 1 limit 10	10 row(s) returned	0.015 sec / 0.000 sec
6	22:05:25	select name, year from cars24 where year = '2017' group by 1,2 order by 1 asc LIMIT 0, 50000	420 row(s) returned	0.016 sec / 0.000 sec

Insight no. 5 –

--Identify 20 car models minimum price whose launch in year ‘2016’. Sort the output in descending order.



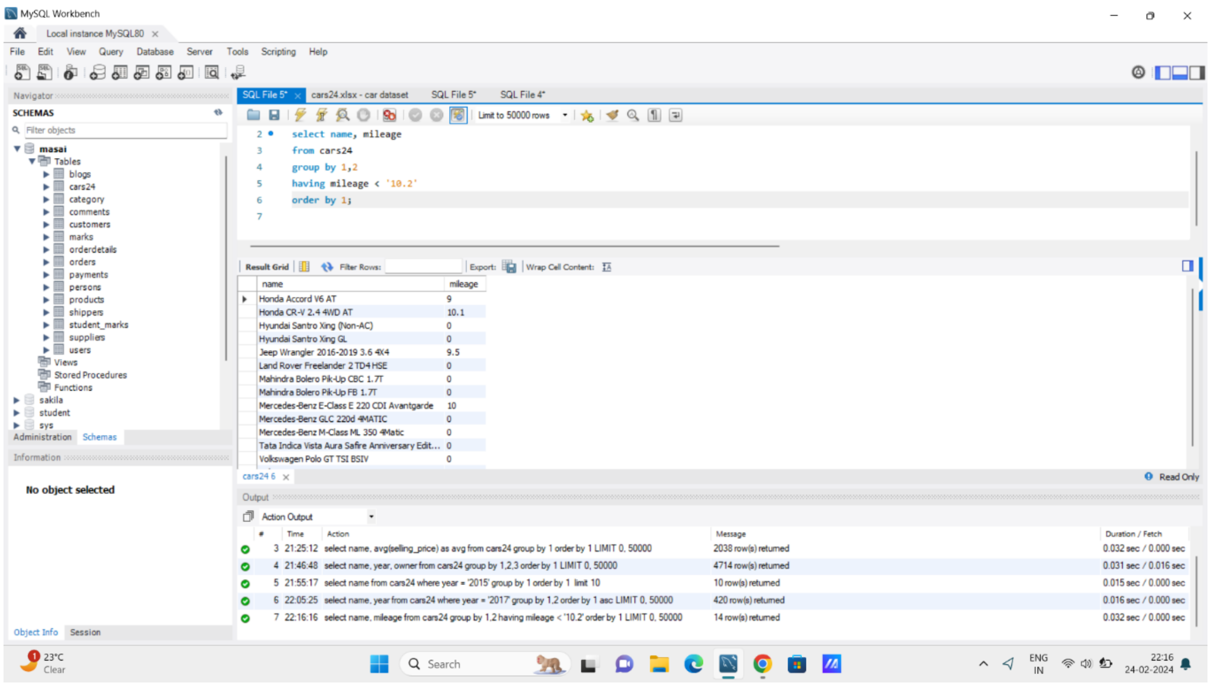
```sql
##5. Identify 20 models minimum price whose launch in year '2016'. Sort the output in desceding order.
select name, min(selling_price) as min_price
from cars24
where year = '2016'
group by 1
order by 1
limit 20;
```

name	year
Audi A3 35 TDI Premium Plus	2017
Audi A3 40 TFSI Premium	2017
Audi Q3 2.0 TDI Quattro Premium Plus	2017
BMW 3 Series 320d	2017
BMW 3 Series 320d GT Luxury Line	2017
BMW 3 Series 320d Luxury Line Plus	2017
BMW X1 sDrive 20D xLine	2017
Chevrolet Beat LT	2017
Chevrolet Enjoy 1.3 TCDi LTZ 7	2017
Datsun GO Anniversary Edition	2017
Datsun GO Plus Anniversary Edition	2017
Datsun GO Plus T	2017
Datsun GO T BSIV	2017

```
#  Time      Action                                                                                   Message              Duration / Fetch
2  21:20:08  select * from cars24 LIMIT 0, 50000                                                      8128 row(s) returned  0.000 sec / 0.015 sec
3  21:25:12  select name, avg(selling_price) as avg from cars24 group by 1 order by 1 LIMIT 0, 50000  2038 row(s) returned  0.032 sec / 0.000 sec
4  21:46:48  select name, year, owner from cars24 group by 1,2,3 order by 1 LIMIT 0, 50000            4714 row(s) returned  0.031 sec / 0.016 sec
5  21:55:17  select name from cars24 where year = '2015' group by 1 order by 1  limit 10             10 row(s) returned    0.015 sec / 0.000 sec
6  22:05:25  select name, year from cars24 where year = '2017' group by 1,2 order by 1 asc LIMIT 0, 50000  420 row(s) returned  0.016 sec / 0.000 sec
```

Insight no. 6 –

--Print the name, mileage in the car models and the mileage which have less than ’10.1’. Sort the output in ascending order.



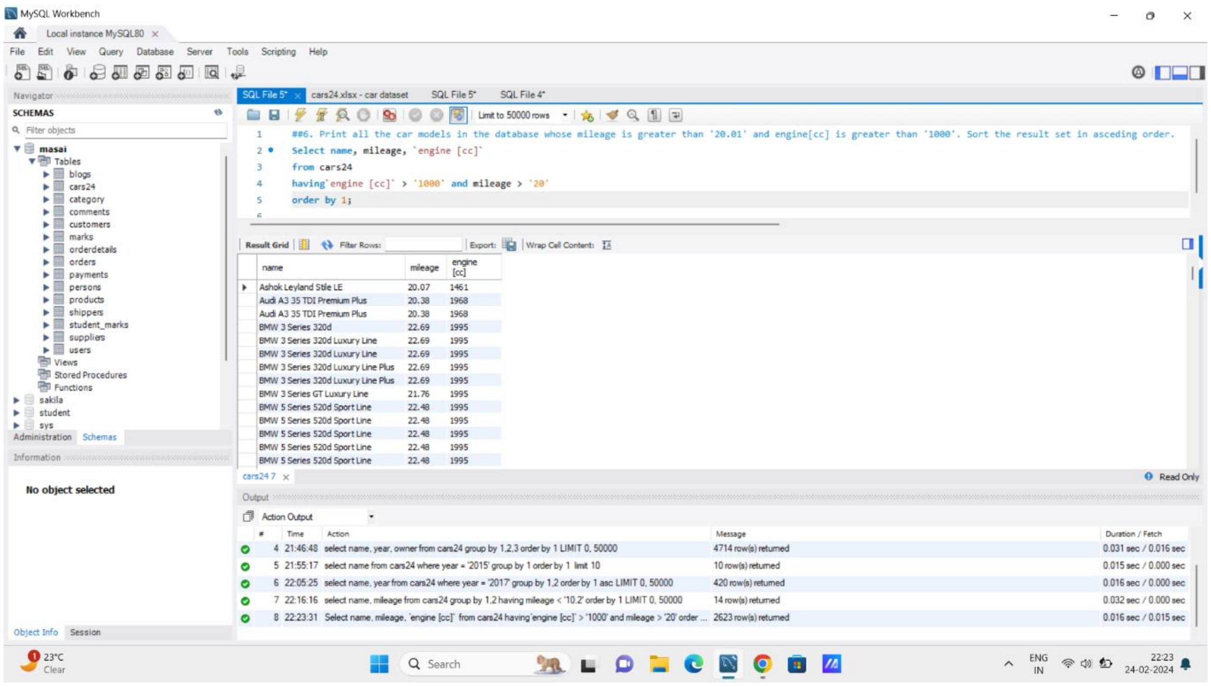
```sql
select name, mileage
from cars24
group by 1,2
having mileage < '10.2'
order by 1;
```

name	mileage
Honda Accord V6 AT	9
Honda CR-V 2.4 4WD AT	10.1
Hyundai Santro Xing (Non-AC)	0
Hyundai Santro Xing GL	0
Jeep Wrangler 2016-2019 3.6 4X4	9.5
Land Rover Freelander 2 TD4 HSE	0
Mahindra Bolero Pik-Up CBC 1.7T	0
Mahindra Bolero Pik-Up FB 1.7T	0
Mercedes-Benz E-Class E 220 CDI Avantgarde	10
Mercedes-Benz GLC 220d 4MATIC	0
Mercedes-Benz M-Class ML 350 4Matic	0
Tata Indica Vista Aura Safire Anniversary Edit...	0
Volkswagen Polo GT TSI BSIV	0

```
#  Time      Action                                                                                       Message              Duration / Fetch
3  21:25:12  select name, avg(selling_price) as avg from cars24 group by 1 order by 1 LIMIT 0, 50000      2038 row(s) returned  0.032 sec / 0.000 sec
4  21:46:48  select name, year, owner from cars24 group by 1,2,3 order by 1 LIMIT 0, 50000               4714 row(s) returned  0.031 sec / 0.016 sec
5  21:55:17  select name from cars24 where year = '2015' group by 1 order by 1  limit 10                 10 row(s) returned    0.015 sec / 0.000 sec
6  22:05:25  select name, year from cars24 where year = '2017' group by 1,2 order by 1 asc LIMIT 0, 50000 420 row(s) returned   0.016 sec / 0.000 sec
7  22:16:16  select name, mileage from cars24 group by 1,2 having mileage < '10.2' order by 1 LIMIT 0, 50000  14 row(s) returned  0.032 sec / 0.000 sec
```

Insight no. 7 –

--Print all the car models in the database, whose mileage is greater than ’20.01’ and `engine[cc]` is greater than ‘1000’. Sort the output in ascending order.



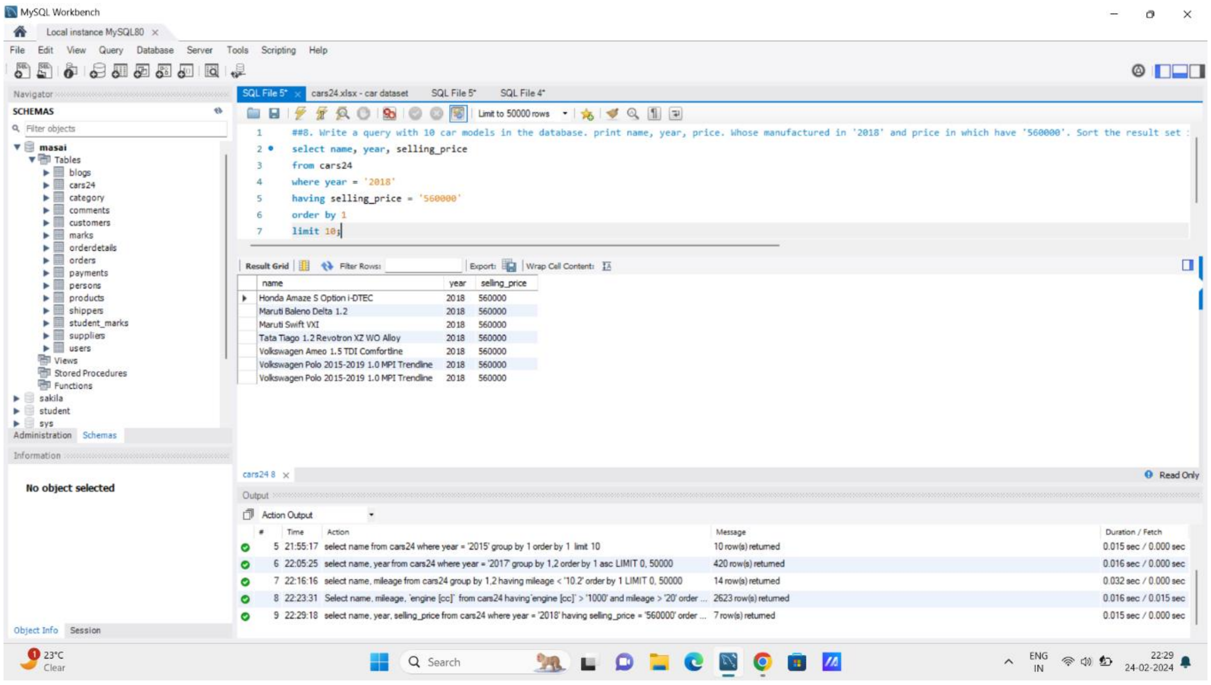
```sql
##6. Print all the car models in the database whose mileage is greater than '20.01' and engine[cc] is greater than '1000'. Sort the result set in asceding order.
Select name, mileage, `engine [cc]`
from cars24
having`engine [cc]` > '1000' and mileage > '20'
order by 1;
```

name	mileage	engine [cc]
Ashok Leyland Stile LE	20.07	1461
Audi A3 35 TDI Premium Plus	20.38	1968
Audi A3 35 TDI Premium Plus	20.38	1968
BMW 3 Series 320d	22.69	1995
BMW 3 Series 320d Luxury Line	22.69	1995
BMW 3 Series 320d Luxury Line	22.69	1995
BMW 3 Series 320d Luxury Line Plus	22.69	1995
BMW 3 Series 320d Luxury Line Plus	22.69	1995
BMW 3 Series GT Luxury Line	21.76	1995
BMW 5 Series 520d Sport Line	22.48	1995
BMW 5 Series 520d Sport Line	22.48	1995
BMW 5 Series 520d Sport Line	22.48	1995
BMW 5 Series 520d Sport Line	22.48	1995
BMW 5 Series 520d Sport Line	22.48	1995

#	Time	Action	Message	Duration / Fetch
4	21:46:48	select name, year, owner from cars24 group by 1,2,3 order by 1 LIMIT 0, 50000	4714 row(s) returned	0.031 sec / 0.016 sec
5	21:55:17	select name from cars24 where year = '2015' group by 1 order by 1 limit 10	10 row(s) returned	0.015 sec / 0.000 sec
6	22:05:25	select name, year from cars24 where year = '2017' group by 1,2 order by 1 asc LIMIT 0, 50000	420 row(s) returned	0.016 sec / 0.000 sec
7	22:16:16	select name, mileage from cars24 group by 1,2 having mileage < '10.2' order by 1 LIMIT 0, 50000	14 row(s) returned	0.032 sec / 0.000 sec
8	22:23:31	Select name, mileage, `engine [cc]` from cars24 having`engine [cc]` > '1000' and mileage > '20' order ...	2623 row(s) returned	0.016 sec / 0.015 sec

Insight no. 8 –

--Write a query with 10 car models in the database. Print name, year, price . Whose manufactured in ‘2018’ and price in which have ‘560000’. Sort the output in ascending order.



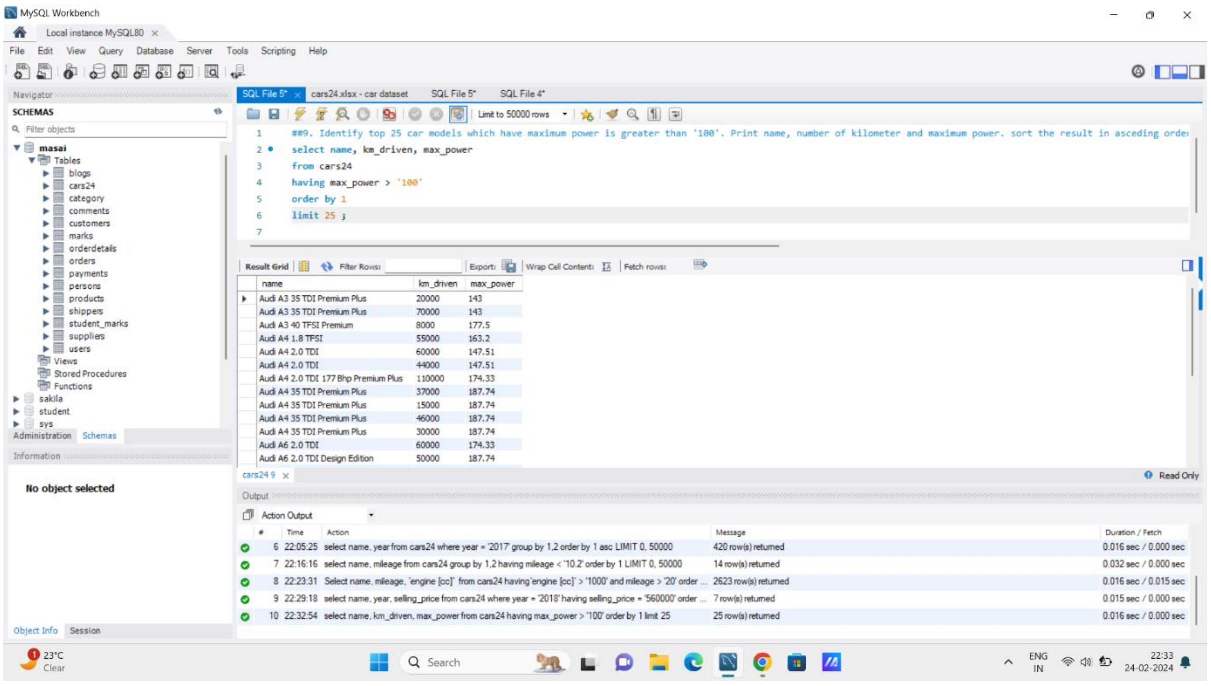
```sql
##8. Write a query with 10 car models in the database. print name, year, price. Whose manufactured in '2018' and price in which have '560000'. Sort the result set :
select name, year, selling_price
from cars24
where year = '2018'
having selling_price = '560000'
order by 1
limit 10;
```

name	year	selling_price
Honda Amaze S Option i-DTEC	2018	560000
Maruti Baleno Delta 1.2	2018	560000
Maruti Swift VXI	2018	560000
Tata Tiago 1.2 Revotron XZ WO Alloy	2018	560000
Volkswagen Ameo 1.5 TDI Comfortline	2018	560000
Volkswagen Polo 2015-2019 1.0 MPI Trendline	2018	560000
Volkswagen Polo 2015-2019 1.0 MPI Trendline	2018	560000

```
#  Time      Action                                                                                         Message              Duration / Fetch
5  21:55:17  select name from cars24 where year = '2015' group by 1 order by 1  limit 10                      10 row(s) returned   0.015 sec / 0.000 sec
6  22:05:25  select name, year from cars24 where year = '2017' group by 1,2 order by 1 asc LIMIT 0, 50000    420 row(s) returned  0.016 sec / 0.000 sec
7  22:16:16  select name, mileage from cars24 group by 1,2 having mileage < '10.2' order by 1 LIMIT 0, 50000 14 row(s) returned   0.032 sec / 0.000 sec
8  22:23:31  Select name, mileage, `engine [cc]` from cars24 having`engine [cc]` > '1000' and mileage > '20' order ...  2623 row(s) returned  0.016 sec / 0.015 sec
9  22:29:18  select name, year, selling_price from cars24 where year = '2018' having selling_price = '560000' order ...  7 row(s) returned  0.015 sec / 0.000 sec
```

Insight no. 9 –

--Identify top 25 car models which have maximum power is greater than ‘100’. Print name, number of kilometer and maximum power. Sort the result set in ascending order.



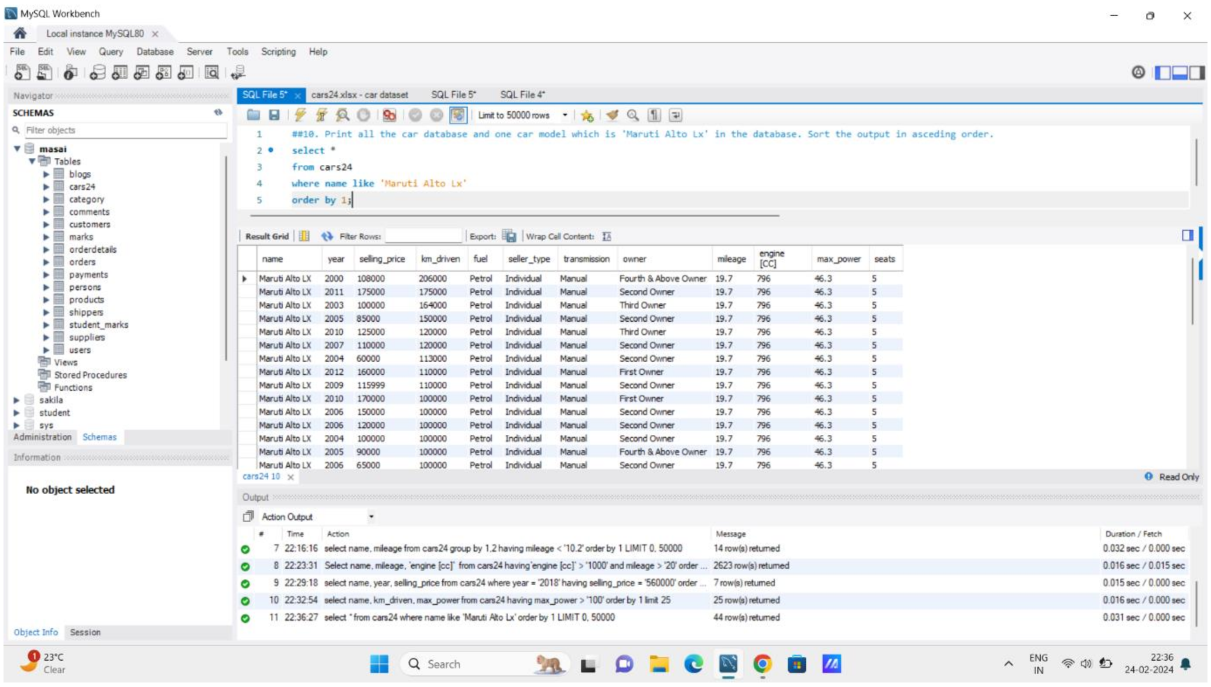
```sql
##9. Identify top 25 car models which have maximum power is greater than '100'. Print name, number of kilometer and maximum power. sort the result in asceding orde
select name, km_driven, max_power
from cars24
having max_power > '100'
order by 1
limit 25 ;
```

name	km_driven	max_power
Audi A3 35 TDI Premium Plus	20000	143
Audi A3 35 TDI Premium Plus	70000	143
Audi A3 40 TFSI Premium	8000	177.5
Audi A4 1.8 TFSI	55000	163.2
Audi A4 2.0 TDI	60000	147.51
Audi A4 2.0 TDI	44000	147.51
Audi A4 2.0 TDI 177 Bhp Premium Plus	110000	174.33
Audi A4 35 TDI Premium Plus	37000	187.74
Audi A4 35 TDI Premium Plus	15000	187.74
Audi A4 35 TDI Premium Plus	46000	187.74
Audi A4 35 TDI Premium Plus	30000	187.74
Audi A6 2.0 TDI	60000	174.33
Audi A6 2.0 TDI Design Edition	50000	187.74

#	Time	Action	Message	Duration / Fetch
6	22:05:25	select name, year from cars24 where year = '2017' group by 1,2 order by 1 asc LIMIT 0, 50000	420 row(s) returned	0.016 sec / 0.000 sec
7	22:16:16	select name, mileage from cars24 group by 1,2 having mileage < '10.2' order by 1 LIMIT 0, 50000	14 row(s) returned	0.032 sec / 0.000 sec
8	22:23:31	Select name, mileage, 'engine [cc]' from cars24 having'engine [cc]' > '1000' and mileage > '20' order ...	2623 row(s) returned	0.016 sec / 0.015 sec
9	22:29:18	select name, year, selling_price from cars24 where year = '2018' having selling_price = '560000' order ...	7 row(s) returned	0.015 sec / 0.000 sec
10	22:32:54	select name, km_driven, max_power from cars24 having max_power > '100' order by 1 limit 25	25 row(s) returned	0.016 sec / 0.000 sec

Insight no. 10 –

--Print all the car database and one car model which is ‘Maruti Alto Xs’ in the database. Sort the result in ascending order.



```
##10. Print all the car database and one car model which is 'Maruti Alto Lx' in the database. Sort the output in asceding order.
select *
from cars24
where name like 'Maruti Alto Lx'
order by 1;
```

name	year	selling_price	km_driven	fuel	seller_type	transmission	owner	mileage	engine [CC]	max_power	seats
Maruti Alto LX	2000	108000	206000	Petrol	Individual	Manual	Fourth & Above Owner	19.7	796	46.3	5
Maruti Alto LX	2011	175000	175000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2003	100000	164000	Petrol	Individual	Manual	Third Owner	19.7	796	46.3	5
Maruti Alto LX	2005	85000	150000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2010	125000	120000	Petrol	Individual	Manual	Third Owner	19.7	796	46.3	5
Maruti Alto LX	2007	110000	120000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2004	60000	113000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2012	160000	110000	Petrol	Individual	Manual	First Owner	19.7	796	46.3	5
Maruti Alto LX	2009	115999	110000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2010	170000	100000	Petrol	Individual	Manual	First Owner	19.7	796	46.3	5
Maruti Alto LX	2006	150000	100000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2006	120000	100000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2004	100000	100000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5
Maruti Alto LX	2005	90000	100000	Petrol	Individual	Manual	Fourth & Above Owner	19.7	796	46.3	5
Maruti Alto LX	2006	65000	100000	Petrol	Individual	Manual	Second Owner	19.7	796	46.3	5

```
#   Time      Action                                                                                          Message                Duration / Fetch
7   22:16:16  select name, mileage from cars24 group by 1,2 having mileage < '10.2' order by 1 LIMIT 0, 50000   14 row(s) returned     0.032 sec / 0.000 sec
8   22:23:31  Select name, mileage, 'engine [cc]' from cars24 having 'engine [cc]' > '1000' and mileage > '20' order ...   2623 row(s) returned   0.016 sec / 0.015 sec
9   22:29:18  select name, year, selling_price from cars24 where year = '2018' having selling_price = '560000' order ...   7 row(s) returned   0.015 sec / 0.000 sec
10  22:32:54  select name, km_driven, max_power from cars24 having max_power > '100' order by 1 limit 25      25 row(s) returned     0.016 sec / 0.000 sec
11  22:36:27  select * from cars24 where name like 'Maruti Alto Lx' order by 1 LIMIT 0, 50000                44 row(s) returned     0.031 sec / 0.000 sec
```