```
|-- First, we will select everything to have a look at how our data looks

⊡select *

_from car_sales_project;
Results Messages

Manufacturer Model

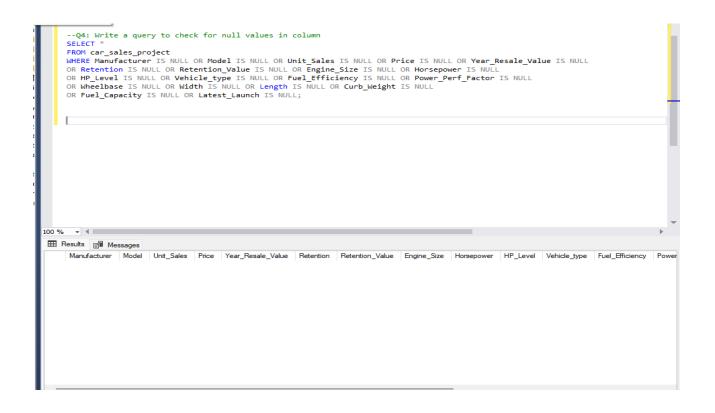
Mercury Mounta
                                                Unit_Sa
27609
                                                                               Year_Resale_Value
20430
                                                                                                                              Retention_Value
GOOD
                                                                                                                                                                                                         HP_Level
Medium HP
                                                                   Price
27560
                                                                                                                                                        Engine_Size
                                                                                                              74%
                                                                                                                                                                                      210
                                                                                                                                                                                                                             Car
Car
       Mercury
                                                                                                                                                        3.29999995231628
                             Villager
                                                 20380
                                                                   22510
                                                                                14795
                                                                                                              66%
                                                                                                                              POOR
                                                                                                                                                                                      170
                                                                                                                                                                                                          Medium HP
      Oldsmobile
Saturn
Mercedes-B
                            Alero
SW
SLK
                                                                   18270
14290
38900
                                                                                                             63%
76%
83%
                                                                                                                              POOR
GOOD
GOOD
POOR
                                                                                                                                                                                                         Medium HP
Medium HP
Medium HP
                                                 80255
                                                                                11459
                                                                                                                                                        2.40000009536743
                                                 5223
7998
54158
                                                                               10790
32436
                                                                                                                                                        1.89999997615814
2.29999995231628
       Nissan
                            Xterra
Golf
                                                                   22799
                                                                                13093
                                                                                                             57%
                                                                                                                                                        3.29999995231628
                                                                                                                                                                                      170
                                                                                                                                                                                                          Medium HP
                                                                                                                                                                                                                             Car
                                                 9761
28976
247994
14690
                                                                                                             77%
81%
76%
55%
                                                                                                                                                                                                         Medium HP
Medium HP
Medium HP
Medium HP
       Volkswagen
                                                                   14900
                                                                                11425
                                                                                                                              GOOD
                                                                                                                                                                                      115
                                                                                                                                                                                                                             Passe
                                                                   35300
17518
36229
                                                                               28720
13245
19890
                                                                                                                              GOOD
GOOD
POOR
POOR
                                                                                                                                                                                      215
133
250
                            M-Class
                                                                                                                                                        3 20000004768372
                            Camry
Aurora
S40
                                                 16957
                                                                   23400
                                                                                14334
                                                                                                                                                        1.89999997615814
       Volvo
                                                                                                             61%
                                                                                                                                                                                      160
                                                                                                                                                                                                          Medium HP
                                                                                                                                                                                                                             Passe
                                                                                                                                                                                                         Medium HP
Medium HP
Medium HP
Medium HP
High HP
Medium HP
Medium HP
Medium HP
                                                                                                                                                                                                                             Car
Car
Passe
       Nissan
                            Quest
                                                 27308
                                                                   26399
                                                                                15380
                                                                                                              58%
                                                                                                                              POOR
                                                                                                                                                        3 29999995231628
                                                                                                                                                                                      170
       Toyota
Acura
Satum
                                                 68411
8588
24546
                                                                   22288
42000
12535
                                                                                                                              GOOD
GOOD
                             4Runne
                                                                                19425
                                                                                                              87%
                                                                                                                                                        2.70000004768372
                                                                               29725
10590
                                                                                                             71%
84%
                                                                                                                                                        3.5
1.89999997615814
                                                                                                                                                                                      100
       Mercedes-B
                            SL-Class
                                                 3311
                                                                   82600
                                                                                58600
                                                                                                              71%
71%
                                                                                                                              GOOD
                                                                                                                                                                                      302
                                                                                                                                                                                                                             Passe
       Oldsmobile
                            Intrigue
GTI
                                                 38554
                                                                   24150
17500
                                                                                17100
                                                                                                                              GOOD
                                                                                                                                                        3.5
                                                                                                                                                                                      215
115
                                                 5596
                                                                                13760
                                                                                                                              GOOD
```

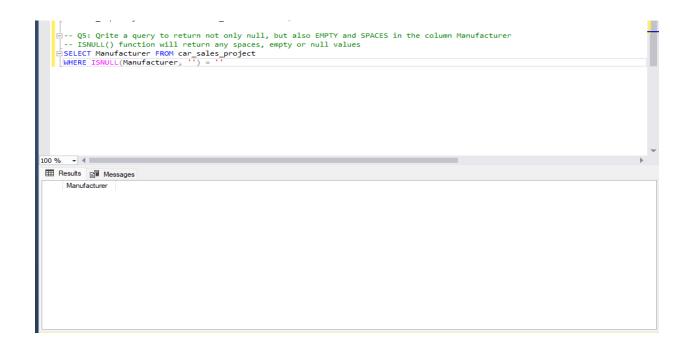
```
-- From above, we see that some columns such as Engine_Size have inconsistent decimal places
--Q2: Write a query to round Engine_size, power_perf_factor, wheelbase, length, width, curb_weight, fuel_capacity to two decimals
      ESELECT

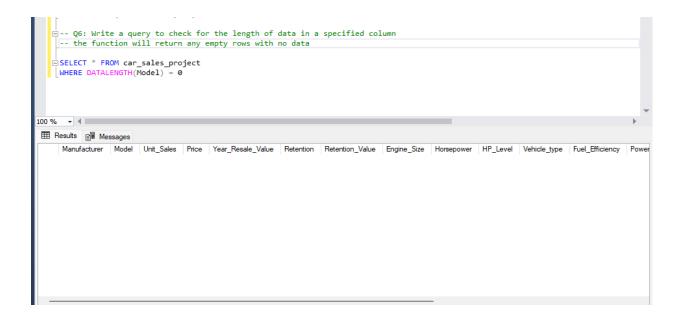
ROUND(Engine_Size, 2) AS Engine_Size,
ROUND(Power_Perf_Factor, 2) AS Power_Perf_Factor,
ROUND(Wheelbase, 2) AS Wheelbase,
ROUND(Width, 2) AS Width,
ROUND(Length, 2) AS Length,
ROUND(Curb_Weight, 2) AS Curb_Weight,
ROUND(Furl_Capacity, 2) AS Fuel_Capacity

FROM car_sales_project;
Results Messages
        Length
190.1
                                                                           111.6
                                                                                                   70.2
                                                                                                                                  3.88
                                                                                                                                                            21
                                      69.67
                                                                           112.2
                                                                                                   74.9
                                                                                                                 194.7
186.7
                                                                                                                                  3.94
                                                                                                                                                             20
15
                                                                                                  70.1
66.4
67.5
70.4
                                      60.73
                                                                           107
                                                                                                                                  2.96
           2.4
1.9
2.3
3.3
                                                                           102.4
94.5
104.3
                                                                                                                                  2.45
3.06
3.82
2.77
                                      49.87
82.81
                                                                                                                 176.9
157.9
                                      69.78
                                                                                                                 178
163.3
                                                                                                                                                             19.4
                                      46.94
                                                                           98.9
                                                                                                  68.3
                                                                                                                                                             14.5
                                      90.5
54.37
103.44
                                                                          111
105.2
113.8
100.5
                                                                                                  72.2
70.1
74.4
67.6
                                                                                                                                                             19
18.5
18.5
15.8
            3.2
                                                                                                                 180.6
                                                                                                                                  4.39
            2.2
4
1.9
                                                                                                                 188.5
205.4
176.6
                                                                                                                                  3.97
                                      66.11
                                      71.17
                                                                                                                                  3.99
            3.3
                                                                           112.2
                                                                                                   74.9
                                                                                                                 194.8
                                                                                                                                                             20
 12
13
14
15
16
17
                                                                                                                 194.8
183.3
196.6
180
177.1
195.9
                                                                                                                                                            18.5
18
12.1
21.1
                                      62.36
91.39
40.7
139.98
                                                                                                  66.5
71.4
66.4
71.3
73.6
            2.7
3.5
1.9
                                                                           105.3
                                                                                                                                  3.44
                                                                                                                                  3.85
2.37
4.13
3.45
                                                                           114.6
102.4
            5
3.5
                                                                           99
109
                                      86.27
  18
19
                                      47.95
                                                                           98.9
                                                                                                  68.3
                                                                                                                 163.3
                                                                                                                                  2.76
3.47
                                                                                                                                                             14.6
                                                                           111.4
```

```
⊡-- Q3: We updated the above, however, when we selected all(*) data again, it showed data was unchanged
-- The reason is that this was done for displaying purposes. We can either create a new table with updated da
-- Now, we will directly update the table, but be cautious if you have a real world project, this is irrevers:
UPDATE car_sales_project
        SET
               Engine_Size = ROUND(Engine_Size, 2),
Power_Perf_Factor = ROUND(Power_perf_Factor, 2),
Wheelbase = ROUND(Wheelbase, 2),
Width = ROUND(Width, 2),
Length = ROUND(Length, 2),
Curb_Weight = ROUND(Curb_Weight, 2),
Fuel_Capacity = ROUND(Fuel_Capacity, 2)
100 % → ◀ ■
 Results Messages
       Value Engine Size
                                      Horsepower
                                                        HP Level
                                                                          Vehicle type
                                                                                             Fuel Efficiency
                                                                                                                   Power Perf Factor
                                                                                                                                              Wheelbase
                                                                                                                                                               Width
                                                                                                                                                                          Length
                                                                                                                                                                                      Curb Weight
                                       210
                                                         Medium HP
                                                                          Car
                                                                                              18
                                                                                                                   85.95
                                                                                                                                              111.6
                                                                                                                                                                70.2
                                                                                                                                                                           190.1
                                                                                                                                                                                      3.88
 2
                    3.3
                                       170
                                                         Medium HP
                                                                                              21
                                                                                                                   69.67
                                                                                                                                              112.2
                                                                                                                                                                74.9
                                                                                                                                                                           194.7
                                                                                                                                                                                       3.94
 3
                    2.4
                                       150
                                                         Medium HP
                                                                          Passenger
                                                                                              27
                                                                                                                   60.73
                                                                                                                                              107
                                                                                                                                                                70.1
                                                                                                                                                                           186.7
                                                                                                                                                                                       2.96
 4
5
                    1.9
                                       124
                                                         Medium HP
                                                                           Passenger
                                                                                              31
                                                                                                                   49.87
                                                                                                                                              102.4
                                                                                                                                                               66.4
                                                                                                                                                                           176.9
                                                                                                                                                                                       2.45
                                                                                                                   82.81
                                                                                                                                                               67.5
                    2.3
                                       190
                                                         Medium HP
                                                                           Passenger
                                                                                              26
                                                                                                                                              94.5
                                                                                                                                                                           157.9
                                                                                                                                                                                       3.06
 6
7
                                       170
                                                                                                                   69.78
                                                                                                                                              104.3
                                                                                                                                                                           178
                    3.3
                                                         Medium HP
                                                                          Car
                                                                                              18
                                                                                                                                                                70.4
                                                                                                                                                                                       3.82
                                       115
                                                         Medium HP
                                                                          Passenger
                                                                                              26
                                                                                                                   46.94
                                                                                                                                              98.9
                                                                                                                                                                68.3
                                                                                                                                                                           163.3
                                                                                                                                                                                       2.77
 8
                    32
                                       215
                                                         Medium HP
                                                                          Car
                                                                                              20
                                                                                                                   90.5
                                                                                                                                              111
                                                                                                                                                                72.2
                                                                                                                                                                           180 6
                                                                                                                                                                                       4.39
 9
                    2.2
                                       133
                                                         Medium HP
                                                                          Passenger
                                                                                              27
                                                                                                                   54.37
                                                                                                                                              105.2
                                                                                                                                                                70.1
                                                                                                                                                                           188.5
                                                                                                                                                                                       3
                                                                                                                                                                74.4
 10
                                                         Medium HP
                                                                                                                   103.44
                                                                                                                                              113.8
                                                                                                                                                                                       3.97
                                       250
                                                                           Passenger
                                                                                              22
                                                                                                                                                                          205.4
                    4
                    1.9
                                       160
                                                         Medium HP
                                                                           Passenger
                                                                                              25
                                                                                                                   66.11
                                                                                                                                              100.5
                                                                                                                                                               67.6
                                                                                                                                                                           176.6
 11
  12
                    3.3
                                       170
                                                         Medium HP
                                                                                              21
                                                                                                                   71.17
                                                                                                                                              112.2
                                                                                                                                                               74.9
                                                                                                                                                                           194.8
                                                                                                                                                                                       3.99
  13
                    2.7
                                       150
                                                         Medium HP
                                                                          Car
                                                                                              23
                                                                                                                   62.36
                                                                                                                                              105.3
                                                                                                                                                               66.5
                                                                                                                                                                           183.3
                                                                                                                                                                                      3.44
```





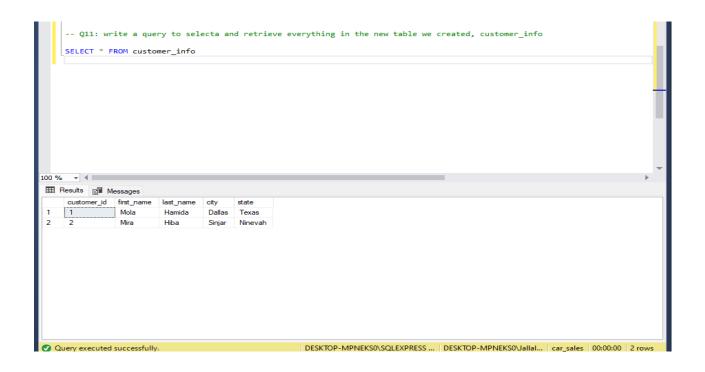


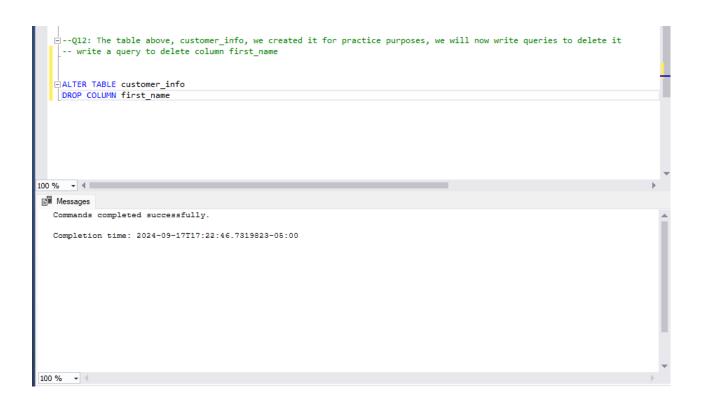
```
--Q7: write a query to find any possible ZEROEs (0) in the calumns manufacturer, model, unit_sales and Price
-- Note: For manufacturer and model, we use "LIKE" since these are varchar and not int

SELECT Manufacturer, Model, Unit_Sales, Price
FROM car_sales_project
WHERE Manufacturer LIKE '0' OR Model LIKE '0' OR Unit_Sales = 0 OR Price = 0;

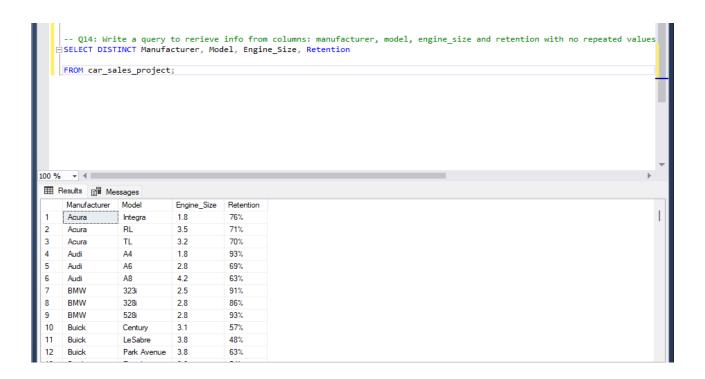
100 %

Manufacturer Model Unit_Sales Price
```

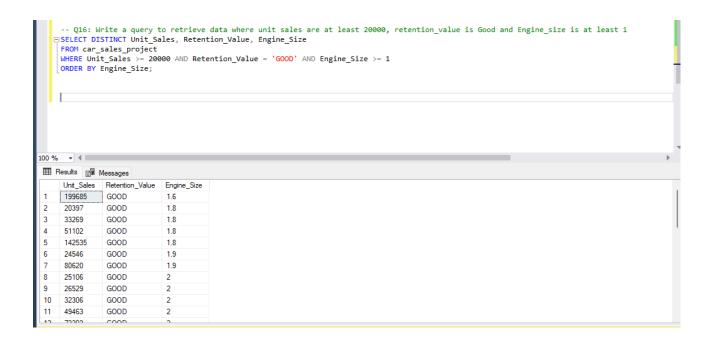








```
_{--}^{-} - Q15: write a query to retrieve only BMW and retention over 70%, limit results to 8 _{--}^{+} - Note: limit is NOT supported in standard SQL SERVER, so we will use TOP AND ORDER BY
      SELECT TOP 8 *
      FROM car_sales_project
WHERE Manufacturer = 'BMW' AND Retention > '70%'
ORDER BY Retention DESC;
100 % → ◀
 Results Messages
       Manufacturer
                       Model
                                Unit_Sales
                                            Price
                                                     Year_Resale_Value Retention
                                                                                      Retention_Value
                                                                                                         Engine_Size
                                                                                                                        Horsepower
                                                                                                                                      HP_Level
                                                                                                                                                    Vehicle_type
                                                                                                                                                                   Fuel_Efficier
       BMW
                       528i
                                17527
                                             38900
                                                     36125
                                                                           93%
                                                                                       GOOD
                                                                                                          2.8
                                                                                                                        193
                                                                                                                                      Medium HP
                                                                                                                                                    Passenger
        BMW
                                19747
                                             26990 24500
                                                                                                                        170
                                                                                                                                      Medium HP
                       323i
                                                                           91%
                                                                                       GOOD
                                                                                                          2.5
                                                                                                                                                    Passenger
                                                                                                                                                                   26
       BMW
                       328i
                               9231
                                            33400 28675
                                                                           86%
                                                                                       GOOD
                                                                                                         2.8
                                                                                                                        193
                                                                                                                                      Medium HP
                                                                                                                                                    Passenger
                                                                                                                                                                   24
```



```
-- Q17: write a query to return data of cars where horsepower is at least 210, vehicle type is car and fuel ifficiency is at least 15
    SELECT Horsepower, Vehicle_type, Fuel_Efficiency
    FROM car_sales_project
WHERE Horsepower >= 210 AND Vehicle_type = 'Car' AND Fuel_Efficiency >= 15
ORDER BY Fuel_Efficiency;
100 % - 4
Results Messages
      Horsepower
                 Vehicle_type
                            Fuel_Efficiency
     230
                 Car
                             15
 2
      255
                             15
                 Car
     230
 3
                 Car
                             15
 4
      300
                 Car
                             15
 5
      240
                 Car
                             16
      230
                 Car
                             17
      230
                 Car
                             17
 8
      220
                 Car
                             18
 9
      210
                 Car
                             18
 10
     210
                 Car
                             19
 11
     215
                 Car
                             20
```

