- **Total Number of Nodes by Type:**

```
1 MATCH (v:Vehicle) RETURN COUNT(v) AS TotalVehicles
2
```

Table

TotalVehicles
33442

Text

```
1 MATCH (s:Seller) RETURN COUNT(s) AS TotalSellers
2
```

Table

TotalSellers
4877

Text

```
neo4j$ MATCH (st:State) RETURN COUNT(st) AS TotalStates
```

Table

TotalStates
36

Text

- **Number of Isolated Nodes by Type:**

```
MATCH (v:Vehicle)
WHERE NOT (v)--()
RETURN COUNT(v) AS IsolatedVehicles
```

Table

	IsolatedVehicles
1	0

Text

```
MATCH (s:Seller)
WHERE NOT (s)--()
RETURN COUNT(s) AS IsolatedSellers
```

Table

	IsolatedSellers
1	0

Text

```
MATCH (st:State)
WHERE NOT (st)--()
RETURN COUNT(st) AS IsolatedStates
```

Table

	IsolatedStates
1	0

Text

- **Number of Total Relationships by Type:**

```
MATCH ()-[r:SOLD_BY]→()
RETURN COUNT(r) AS TotalSoldByRelationships
```

TotalSoldByRelationships
33442

```
MATCH ()-[r:SELLS]→()
RETURN COUNT(r) AS TotalSellsRelationships
```

TotalSellsRelationships
33442

```
MATCH ()-[r:OPERATES_IN]→()
RETURN COUNT(r) AS TotalOperatesInRelationships
```

TotalOperatesInRelationships
6033

```
MATCH ()-[r:HAS_SELLER]→()
RETURN COUNT(r) AS TotalHasSellerRelationships
```

TotalHasSellerRelationships
6033

```
MATCH ()-[r:SOLD_IN]→()
RETURN COUNT(r) AS TotalSoldInRelationships
```

TotalSoldInRelationships
33442

```
MATCH ()-[r:SELLS_IN]→()
RETURN COUNT(r) AS TotalSellsInRelationships
```

TotalSellsInRelationships
33442

- **Number of Vehicles Sold by Each Seller:**

```
MATCH (s:Seller)-[:SELLS]→(v:Vehicle)
RETURN s.name AS SellerName, COUNT(v) AS VehiclesSold
ORDER BY VehiclesSold DESC
Limit 25
```

Table | Text | Code

	SellerName	VehiclesSold
1	"ford motor credit company llc"	719
2	"santander consumer"	639
3	"nissan infiniti lt"	587
4	"wells fargo dealer services"	528
5	"jpmorgan chase bank n.a."	506
6	"financial services remarketing (lease)"	464
7	"avis corporation"	463
8	"nissan-infiniti lt"	375
9	"enterprise veh exchange/rental"	362
10	"ge fleet services for itself/servicer"	314
11	"the hertz corporation"	278
12	"ahfc/honda lease trust/hvt inc."	275
13	"enterprise vehicle exchange / tra / rental / tulsa"	254
14	"avis budget group"	244

Started streaming 25 records after 17 ms and completed after 49 ms.

15	"dt credit corporation"	219
16	"toyota financial services"	213
17	"hyundai motor finance"	209
18	"nissan north america inc."	206
19	"kia motors america inc"	198
20	"tdaf remarketing"	195
21	"ford motor credit company llc pd"	194
22	"high bid trading co inc"	177
23	"mercedes-benz financial services"	162
24	"chrysler capital"	162
25	"aaero sweet company"	154

- **Number of Sellers Operating in Each State:**

```
1 MATCH (st:State)←[:OPERATES_IN]-(s:Seller)
2 RETURN st.name AS StateName, COUNT(s) AS NumberOfSellers
3 ORDER BY NumberOfSellers DESC
```

Table | Text | Code

	StateName	NumberOfSellers
1	"ca"	945
2	"fl"	611
3	"pa"	433
4	"tx"	422
5	"il"	305
6	"ga"	280
7	"nj"	253

Started streaming 36 records after 1 ms and completed after 6 ms.

8	"va"	238
9	"nv"	229
10	"mn"	225
11	"nc"	205
12	"ny"	202
13	"az"	198
14	"mi"	153

15	"wi"	132
16	"mo"	124
17	"wa"	121
18	"sc"	108
19	"ne"	96
20	"oh"	93
21	"tn"	88

22	"ma"	85
23	"on"	85
24	"in"	81
25	"co"	81
26	"la"	64
27	"ut"	50
28	"pr"	38

29	"md"	25
30	"ab"	19
31	"hi"	17
32	"or"	14
33	"ok"	8
34	"qc"	2
35	"ms"	2
36	"nm"	1

- **Average Selling Price of Vehicles:**

```
1 MATCH (v:Vehicle)
2 RETURN AVG(v.selling_price) AS AverageSellingPrice
```

Table | Text

	AverageSellingPrice
1	10764.667593672511

- **Vehicles with Selling Price Above and Below the MMR:**

```
1 MATCH (v:Vehicle)
2 WHERE v.selling_price > v.mmr
3 RETURN COUNT(v) AS AboveMMR
```

Table | Text

	AboveMMR
1	13988

```
1 MATCH (v:Vehicle)
2 WHERE v.selling_price < v.mmr
3 RETURN COUNT(v) AS BelowMMR
```

Table | Text

	BelowMMR
1	18938

- **Most Common Vehicle Makes:**

```
1 MATCH (v:Vehicle)
2 RETURN v.make AS Make, COUNT(v) AS Count
3 ORDER BY Count DESC
4 LIMIT 10
```

Table | Text | Code

	Make	Count
1	"Ford"	5247
2	"Chevrolet"	3390
3	"Nissan"	2266
4	"Toyota"	2216
5	"Honda"	1848
6	"Dodge"	1807
7	"BMW"	1529

Started streaming 10 records after 1 ms and completed after 39 ms.

8	"Hyundai"	1241
9	"Mercedes-Benz"	1081
10	"Chrysler"	1018

- **Distribution of Vehicle Conditions:**

```
1 MATCH (v:Vehicle)
2 RETURN v.condition AS Condition, COUNT(v) AS Count
3 ORDER BY Condition
```

Table | Text | Code

Condition	Count
1	520
2	1379
3	596
4	648
5	459
11	4
12	7
13	1
14	14
15	8
16	6
17	15

Table

Text

Code

18	22
19	2325
21	470
22	290
23	421
24	465
25	666
26	605
27	780
28	900
29	863
31	400

32	368
33	437
34	656
35	1052
36	909
37	964
38	749
39	763
41	854
42	818
43	869
44	879
45	463
46	461
47	408
48	470
49	447
null	10011

- **Vehicle Distribution by Year:**

```
1 MATCH (v:Vehicle)
2 RETURN v.year AS Year, COUNT(v) AS Count
3 ORDER BY Year
```

Table | Text | Code

Year	Count
1986	1
1987	1
1989	4
1990	7
1991	9
1992	23
1993	26
1994	48
1995	94
1996	133
1997	190
1998	290

1999	453
2000	694
2001	833
2002	1278
2003	1537
2004	1873
2005	2134
2006	2584
2007	2649
2008	2503
2009	1559
2010	1755
2011	3586

2012	1667
2013	3693
2014	3645
2015	173

- **Price Range Analysis:**

```
// Define price ranges and count vehicles in each range
MATCH (v:Vehicle)
WITH v, v.selling_price AS price
RETURN
  count(CASE WHEN price ⩽ 10000 THEN v END) AS Under_10000,
  count(CASE WHEN price > 10000 AND price ⩽ 20000 THEN v END) AS From_10001_To_20000,
  count(CASE WHEN price > 20000 AND price ⩽ 30000 THEN v END) AS From_20001_To_30000,
  count(CASE WHEN price > 30000 THEN v END) AS Above_30000
```

Table | Text | Code

	Under_10000	From_10001_To_20000	From_20001_To_30000	Above_30000
1	18893	9881	3353	1314

- **Average Selling Price**

```
MATCH (v:Vehicle)
RETURN MIN(v.selling_price) AS MinPrice, MAX(v.selling_price) AS MaxPrice, AVG(v.selling_price) AS
AvgPrice
```

Table | Text

	MinPrice	MaxPrice	AvgPrice
1	1	154000	10764.667593672511

- **Frequency of Vehicle Colors:**

```
1 MATCH (v:Vehicle)
2 RETURN v.color AS Color, COUNT(v) AS Count
3 ORDER BY Count DESC
4 LIMIT 10
```

Table | Text | Code

Color	Count
"black"	6491
"white"	5942
"silver"	5153
"gray"	4889
"blue"	3430
"red"	2577
"green"	1001
"gold"	897
"—"	826
"beige"	712

- **Seller Performance Over Time:**

```
MATCH (s:Seller)-[:SELLS]→(v:Vehicle)
RETURN s.name AS SellerName, v.sale_date.year AS Year, COUNT(v) AS VehiclesSold
ORDER BY SellerName, Year
```

Table | Text | Code

	SellerName	Year	VehiclesSold
1	"1 cochran of monroeville"	1900	3
2	"1995 first avenue station"	1900	2
3	"1st capital finance"	1900	1
4	"1st choice automotive corp"	1900	1
5	"1st commercial"	1900	6
6	"1st liberty fcu"	1900	1
7	"1st national bank of scotia"	1900	2

Started streaming 4878 records in less than 1 ms and completed after 126 ms, displaying first 1000 rows.

- **Geographical Distribution of Sales:**

```
1 MATCH (v:Vehicle)-[:SOLD_IN]→(st:State)
2 RETURN st.name AS StateName, COUNT(v) AS VehiclesSold
3 ORDER BY VehiclesSold DESC
```

Table

Text

Code

StateName	VehiclesSold
"ca"	8485
"fl"	3316
"tx"	2262
"pa"	2237
"il"	1854
"ga"	1377
"va"	1362
"mi"	1312
"nc"	1071
"az"	1021
"ny"	1014

"nj"	972
"mn"	910
"nv"	885
"oh"	568
"tn"	553
"mo"	516
"ne"	488
"wi"	428
"wa"	381
"sc"	365
"la"	354
"in"	303
"co"	274

"pr"	271
"ma"	266
"on"	209
"ut"	121
"md"	103
"ab"	68
"or"	32
"hi"	28
"ok"	21
"qc"	12
"ms"	2
"nm"	1

- **Relationship Density:**

```
MATCH (n)
WITH COUNT(n) AS totalNodes
MATCH ()-[r]→()
WITH COUNT(r) AS totalRelationships, totalNodes
RETURN totalRelationships, totalNodes, toFloat(totalRelationships) / totalNodes AS
avgRelationshipsPerNode
```

Table | Text

	totalRelationships	totalNodes	avgRelationshipsPerNode
1	145834	38355	3.802216138704211