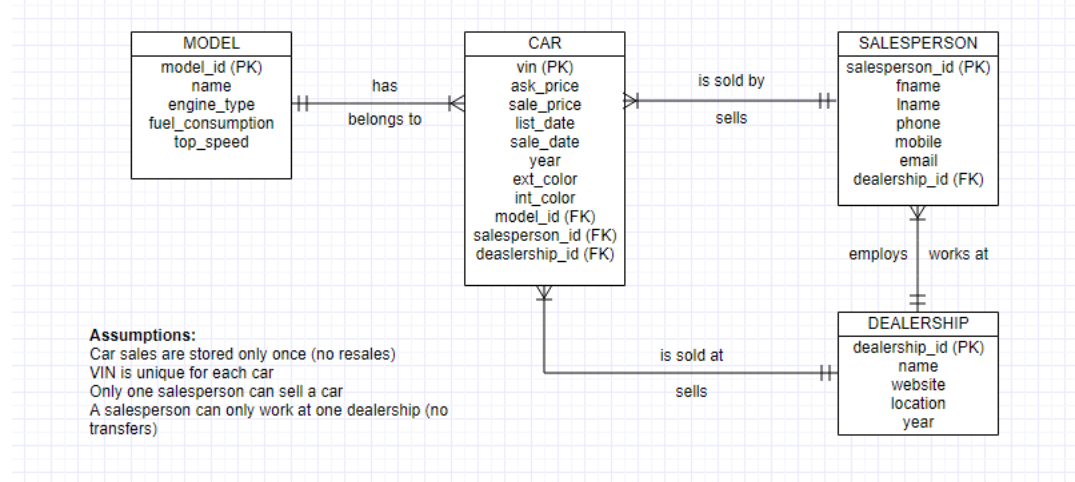


DATABASE PROJECT

PART 1: DATA MODELING, CREATION AND BASIC QUERIES

ERD



Data Dictionary

MODEL			
Field	Data Type	Description	Example Data
Model_ID (PK)	INT	The unique ID for each model (required)	500
name	VARCHAR	The name of the model	Huracan Coupe
engine_type	VARCHAR	The type of engine in the model	V8
fuel_consumption	VARCHAR	Average fuel consumption of the model	12.3 l/100 km
top_speed	VARCHAR	The top speed performance measure of the model	324 km/h

CAR			
Field	Data Type	Description	Example Data
VIN (PK)	VARCHAR	The unique ID for each car (required)	SCBGE11RXBLA13261
ask_price	DECIMAL	The retail price of car	219800.00
sale_price	DECIMAL	The price the car was sold at	215000.00
list_date	DATE	The date the car was put on market	2017-01-01
sale_date	DATE	The date the car was sold	2017-01-01
year	YEAR	The year the car was made	2016
ext_color	VARCHAR	The exterior color of the car	Havana
int_color	VARCHAR	The interior color of the car	Beluga
Model_ID (FK)	INT	The unique ID of the model of the car	550
Salesperson_ID (FK)	INT	The unique ID of the person who sold the car	1
Dealership_ID (FK)	INT	The unique ID of the dealership the car was sold from	104

SALESPERSON			
Field	Data Type	Description	Example Data
Salesperson_ID	INT	The unique ID of the salesperson	1
Fname	VARCHAR	The last name of the salesperson	Liu
Lname	VARCHAR	The first name of the salesperson	Allen
Phone	VARCHAR	Phone number of the salesperson	85389865476
Mobile	VARCHAR	Mobile number of the salesperson	310 837 2039
Email	VARCHAR	Email address of the salesperson	aliu@lamborghini.com
Dealership_ID	INT	The unique ID of the dealership the salesperson works for	100

DEALERSHIP			
Field	Data Type	Description	Example Data
Dealership_ID	INT	The unique ID of the dealership	100
Name	VARCHAR	Name of the dealership	Lamborghini Milano
Website	VARCHAR	The URL of the website	https://lamborghini-milano.com/it
Location	VARCHAR	The location of the dealership	Milano, Italy
Year	YEAR	Year the dealership was created	1982

Database

Car

Table structure											Relation view										
#	Name	Type	Collation	Attributes	Null	Default	Extra	Action													
<input type="checkbox"/>	1	vin	varchar(100)	utf8_bin	No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	2	ask_price	decimal(10,2)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	3	sale_price	decimal(10,2)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	4	list_date	date		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	5	sale_date	date		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	6	year	year(4)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	7	ext_color	varchar(100)	utf8_bin	No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	8	int_color	varchar(100)	utf8_bin	No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	9	model_id	int(11)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	10	salesperson_id	int(100)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/>	11	dealership_id	int(100)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values													
<input type="checkbox"/> Check all With selected: Browse Change Drop Primary Unique Index																					
Showing rows 0 - 24 (500 total, Query took 0.0005 seconds.)																					
SELECT * FROM 'CAR'																					
<div>1 > >> <input type="checkbox"/> Show all Number of rows: 25 Filter rows: <input type="text" value="Search this table"/></div>																					
Sort by key: <div>None</div>																					
+ Options																					
<input type="checkbox"/>	Edit Copy Delete	vin	ask_price	sale_price	list_date	sale_date	year	ext_color	int_color	model_id	salesperson_id	dealership_id									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13261	219800.00	215000.00	2017-01-01	2017-01-01	2016	Havana	Beluga	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13262	219800.00	211789.00	2017-01-01	2017-01-01	2016	Granite	Magnolia - Dark Stained Burr Walnut	550	2	102									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13263	219800.00	215000.00	2017-01-01	2017-01-02	2016	Granite	Magnolia - Dark Stained Burr Walnut	550	2	102									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13264	219800.00	218000.00	2017-01-01	2017-01-03	2017	Havana	Magnolia - Dark Stained Burr Walnut	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13265	219800.00	215000.00	2017-01-01	2017-01-04	2017	Moonbeam	Magnolia - Chestnut	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13266	219800.00	215282.00	2017-01-01	2017-01-05	2017	Windsor Blue	Magnolia - Chestnut	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13267	219800.00	220567.00	2017-01-01	2017-01-01	2017	Windsor Blue	Beluga	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13268	219800.00	220000.00	2017-01-01	2017-01-01	2017	St James Red (Solid)	Beluga	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13269	219800.00	215930.00	2017-01-01	2017-01-01	2017	Windsor Blue	Magnolia - Dark Stained Burr Walnut	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13270	219800.00	215678.00	2017-01-01	2017-01-01	2017	Blue Crystal	Magnolia - Dark Stained Burr Walnut	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13271	219800.00	215999.00	2017-01-01	2017-01-01	2017	Blue Crystal	Magnolia - Dark Stained Burr Walnut	550	2	102									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13272	219800.00	220837.00	2017-04-25	2017-04-25	2017	Windsor Blue	Beluga	550	9	100									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13273	219800.00	220000.00	2017-04-25	2017-04-26	2017	Blue Crystal	Magnolia - Dark Stained Burr Walnut	550	9	100									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13274	219800.00	220846.00	2017-04-25	2017-04-25	2017	Blue Crystal	Magnolia - Dark Stained Burr Walnut	550	1	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13275	219800.00	220474.00	2017-04-25	2017-04-25	2017	Blue Crystal	Magnolia - Dark Stained Burr Walnut	550	2	102									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13276	219800.00	224000.00	2017-04-25	2017-04-25	2017	Blue Crystal	Linen	550	4	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13277	219800.00	222500.00	2017-04-25	2017-04-25	2017	St James Red (Solid)	Magnolia - Chestnut	550	4	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13278	219800.00	219800.00	2017-04-25	2017-04-26	2017	St James Red (Solid)	Beluga	550	4	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13279	219800.00	220000.00	2017-04-25	2017-04-27	2017	St James Red (Solid)	Beluga	550	4	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13280	219800.00	220000.00	2017-04-25	2017-04-25	2017	Granite	Beluga	550	4	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13281	219800.00	220600.00	2017-04-25	2017-04-25	2017	Granite	Magnolia - Chestnut	550	4	104									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13282	219800.00	220837.00	2017-04-25	2017-04-25	2017	St James Red (Solid)	Magnolia - Dark Stained Burr Walnut	550	8	101									
<input type="checkbox"/>	Edit Copy Delete	SCBGE11RXBLA13283	219800.00	221500.00	2017-04-25	2017-04-26	2017	Blue Crystal	Beluga	550	8	101									
<input type="checkbox"/>	Edit Copy Delete	SCBGE21RXBLA14261	209000.00	205000.00	2017-01-01	2017-01-05	2017	Blue Crystal	Beluga	551	6	101									
<input type="checkbox"/>	Edit Copy Delete	SCBGE21RXBLA14262	209000.00	205000.00	2017-01-01	2017-01-06	2017	Blue Crystal	Beluga	551	6	101									

Salesperson

Table structure

Relation view

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	salesperson_id	int(100)			No	None		
2	fname	varchar(100)	utf8_bin		No	None		
3	lname	varchar(100)	utf8_bin		No	None		
4	phone	varchar(100)	utf8_bin		No	None		
5	mobile	varchar(100)	utf8_bin		No	None		
6	email	varchar(100)	utf8_bin		No	None		
7	dealership_id	int(100)			No	None		

☐ Check all With selected: Browse Change Drop Primary Unique Index

Print view Propose table structure Move columns Improve table structure

Add column(s) after dealership_id Go

+ Indexes

Information

Space usage		Row statistics	
Data	16 KIB	Format	dynamic
Index	16 KIB	Collation	utf8_bin
Total	32 KIB	Creation	Apr 04, 2018 at 02:30 AM
		Last update	Apr 04, 2018 at 02:30 AM

Browse

Structure

SQL

Search

Insert

Export

Import

Operations

Triggers

Showing rows 0 - 10 (11 total, Query took 0.0003 seconds.)

```
SELECT * FROM `SALESPERSON`
```

☐ Show all Number of rows: Filter rows:

Sort by key:

+ Options

		salesperson_id	fname	lname	phone	mobile	email	dealership_id
<input type="checkbox"/>	Edit Copy Delete	1	Allan	Zhu	82 (2) 2553 7713	852 9374 7713	allan_zhu@lamborghini.com	104
<input type="checkbox"/>	Edit Copy Delete	2	Bibin	Khail	702 44114411	974 64174841	bkhail@lamborghini.com	102
<input type="checkbox"/>	Edit Copy Delete	3	Brian	Frye	888 294 1133	310 384 3843	carman@lamborghini.com	101
<input type="checkbox"/>	Edit Copy Delete	4	Elaine	Lee	82 (2) 2553 7713	852 9384 3334	e_lee@lamborghini.com	104
<input type="checkbox"/>	Edit Copy Delete	5	Minji	Kim	82 (2) 2553 7713	852 8986 5476	m_kim@lamborghini.com	104
<input type="checkbox"/>	Edit Copy Delete	6	Kelly	Mazur	888 294 1133	310 837 2039	kmazur@lamborghini.com	101
<input type="checkbox"/>	Edit Copy Delete	7	Nadia	Howe	702 44114411	974 93843439	nhowe@lamborghini.com	102
<input type="checkbox"/>	Edit Copy Delete	8	Ray	Collepay	888 294 1133	310 823 3402	salepro@lamborghini.com	101
<input type="checkbox"/>	Edit Copy Delete	9	Sebastian	Craig	39 (0)30 8866 7888	39 (0)30 8866 1254	sc@lamborghini.com	100
<input type="checkbox"/>	Edit Copy Delete	10	Thomas	Whitney	39 (0)30 8866 7888	39 (0)30 4356 9384	tw@lamborghini.com	100
<input type="checkbox"/>	Edit Copy Delete	11	Veronika	Wagner	39 (0)30 8866 7888	39 (0)30 3947 3984	vw@lamborghini.com	100

☐ Check all With selected: Edit Copy Delete Export

Model

Table structure

Relation view

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
<input type="checkbox"/>	1	model_id	int(11)		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
<input type="checkbox"/>	2	name	varchar(100) latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
<input type="checkbox"/>	3	enginetype	varchar(100) latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
<input type="checkbox"/>	4	fuel_consump	varchar(100) latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
<input type="checkbox"/>	5	top_speed	varchar(100) latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values

☐ Check all With selected: Browse Change Drop Primary Unique Index

Print view Propose table structure Move columns Improve table structure

Add column(s)

+ Indexes

Information

Space usage	
Data	16 KiB
Index	0 B
Total	16 KiB

Row statistics	
Format	dynamic
Collation	latin1_swedish_ci
Creation	Apr 03, 2018 at 08:51 PM
Last update	Apr 03, 2018 at 09:04 PM

Browse

Structure

SQL

Search

Insert

Export

Import

Operations

Showing rows 0 - 5 (6 total, Query took 0.0003 seconds.)

```
SELECT * FROM `MODEL`
```

☐ Show all | Number of rows: | Filter rows:

Sort by key:

+ Options

Edit Copy Delete

	model_id	name	enginetype	fuel_consump	top_speed
<input type="checkbox"/> Edit Copy Delete	500	URUS	V8 bi-turbo	12.3 l/100 km	305 km/h
<input type="checkbox"/> Edit Copy Delete	550	Huracan Coupe	V10	14.5 l/100 km	>325 km/h
<input type="checkbox"/> Edit Copy Delete	551	Huracan Spyder	V10	14.6 l/100 km	324 km/h
<input type="checkbox"/> Edit Copy Delete	552	Huracan Performante	V10	14.6 l/100 km	324 km/h
<input type="checkbox"/> Edit Copy Delete	702	Aventador S Coupe	V12	16.9 l/100 km	350 km/h
<input type="checkbox"/> Edit Copy Delete	703	Aventador S Roadster	V12	16.9 l/100 km	350 km/h

☐ Check all With selected: Edit Copy Delete Export

Dealership

Browse
Structure
SQL
Search
Insert
Export
Import
Operations
Triggers

Table structure
Relation view

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	dealership_id	int(100)			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
2	name	varchar(100)	utf8_bin		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
3	website	varchar(100)	utf8_bin		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
4	location	varchar(100)	utf8_bin		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
5	year	year(4)			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values

Check all
With selected:
Browse
Change
Drop
Primary
Unique
Index

Print view
Propose table structure
Move columns
Improve table structure

Add
1
column(s)
after year
Go

+ Indexes

Information			
Space usage		Row statistics	
Data	16 KiB	Format	dynamic
Index	0 B	Collation	utf8_bin
Total	16 KiB	Creation	Apr 04, 2018 at 02:26 AM
		Last update	Apr 04, 2018 at 02:26 AM

[Browse](#)
[Structure](#)
[SQL](#)
[Search](#)
[Insert](#)
[Export](#)
[Import](#)
[Operations](#)
[Triggers](#)

Showing rows 0 - 3 (4 total, Query took 0.0005 seconds.)

```
SELECT * FROM `DEALERSHIP`
```

☐ Show all Number of rows: 25 ▼ Filter rows: Search this table

Sort by key: None





+ Options

		dealership_id	name	website	location	year
<input type="checkbox"/>	 Edit  Copy  Delete	100	Lamborghini Milano	https://lamborghini-milano.com/it	Milano, Italy	1982
<input type="checkbox"/>	 Edit  Copy  Delete	101	Lamborghini Miami	https://lamborghini-miami.com/en	North Miami Beach, Florida	1990
<input type="checkbox"/>	 Edit  Copy  Delete	102	Lamborghini Las Vegas	http://www.lamborghini-lasvegas.com/	Las Vegas, Nevada	2005
<input type="checkbox"/>	 Edit  Copy  Delete	104	Lamborghini Seoul	https://lamborghini-seoul.com/en	Seoul, South Korea	2007

 Check all
 With selected:
 Edit
 Copy
 Delete
 Export

☐ Show all Number of rows: 25 Filter rows: Search this table

Query results operations

 Print view  Export  Display chart  Create view

PART 2: QUERIES

Average Sales Price for All Vehicles

```
SELECT ROUND(AVG(sale_price),2) AS 'Average Sale Price' FROM CAR
```

1 ▾

☐ Show all

Number of rows:

25 ▾

Filter rows:

Search this table

Sort by key: None ▾

+ Options

Average Sale Price

240264.46

Average Sales Price by Dealership

```
SELECT ROUND(AVG(CAR.sale_price),2) AS 'Average Sale Price', DEALERSHIP.location AS 'Dealership' FROM CAR INNER JOIN DEALERSHIP ON CAR.dealership_id = DEALERSHIP.dealership_id GROUP BY DEALERSHIP.location ORDER BY AVG(CAR.sale_price)
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all

Number of rows:

25 ▾

Filter rows:

Search this table

Sort by key: None ▾

+ Options

Average Sale Price Dealership

204824.51 Milano, Italy

226782.13 Seoul, South Korea

255729.49 North Miami Beach, Florida

266855.91 Las Vegas, Nevada

Average difference in selling and asking price (sales price – ask price) by dealership

```
SELECT ROUND(AVG(CAR.sale_price - CAR.ask_price),2) AS 'Average Difference Prices (Sale-Ask)', DEALERSHIP.location AS 'Dealership' FROM CAR INNER JOIN DEALERSHIP ON CAR.dealership_id = DEALERSHIP.dealership_id GROUP BY DEALERSHIP.location ORDER BY AVG(CAR.sale_price - CAR.ask_price)
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all

Number of rows:

25 ▾

Filter rows:

Search this table

Sort by key: None ▾

+ Options

Average Difference Prices (Sale-Ask) Dealership

-3554.96 Milano, Italy

-349.56 Seoul, South Korea

4220.95 North Miami Beach, Florida

5298.70 Las Vegas, Nevada

Average time on the market by dealership

```
SELECT ROUND(AVG(DATEDIFF(CAR.sale_date,CAR.list_date)),2) AS 'Average Time on Market (Days)', DEALERSHIP.location AS 'Dealership' FROM CAR INNER JOIN DEALERSHIP ON CAR.dealership_id = DEALERSHIP.dealership_id GROUP BY DEALERSHIP.location ORDER BY AVG(DATEDIFF(CAR.sale_date,CAR.list_date))
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 ▼ Filter rows:

Sort by key: None ▼

+ Options

Average Time on Market (Days)	Dealership
1.49	Las Vegas, Nevada
4.71	North Miami Beach, Florida
10.80	Seoul, South Korea
21.49	Milano, Italy

Total number of cars sold by model for each dealership

```
SELECT COUNT(CAR.vin) AS 'Number of Cars Sold', MODEL.name AS 'Model Name', DEALERSHIP.location AS 'Dealership' FROM CAR JOIN DEALERSHIP ON CAR.dealership_id = DEALERSHIP.dealership_id JOIN MODEL ON CAR.model_id = MODEL.model_id GROUP BY DEALERSHIP.location, MODEL.name ORDER BY DEALERSHIP.location, COUNT(CAR.vin)
```

☐ Show all | Number of rows: 25 ▼ Filter rows:

+ Options

Number of Cars Sold	Model Name	Dealership
1	Huracan Spyder	Las Vegas, Nevada
4	Huracan Coupe	Las Vegas, Nevada
5	Huracan Performante	Las Vegas, Nevada
8	Aventador S Coupe	Las Vegas, Nevada
11	Aventador S Roadster	Las Vegas, Nevada
14	URUS	Las Vegas, Nevada
2	Huracan Coupe	Milano, Italy
5	Aventador S Coupe	Milano, Italy
6	Huracan Spyder	Milano, Italy
34	Huracan Performante	Milano, Italy
2	Huracan Coupe	North Miami Beach, Florida
29	Aventador S Roadster	North Miami Beach, Florida
32	Huracan Performante	North Miami Beach, Florida
33	Aventador S Coupe	North Miami Beach, Florida
52	Huracan Spyder	North Miami Beach, Florida
61	URUS	North Miami Beach, Florida
8	Huracan Spyder	Seoul, South Korea
9	Aventador S Coupe	Seoul, South Korea
15	Huracan Coupe	Seoul, South Korea
20	Aventador S Roadster	Seoul, South Korea
33	URUS	Seoul, South Korea
118	Huracan Performante	Seoul, South Korea

☐ Show all | Number of rows: 25 ▼ Filter rows:

Own Query: Total number of cars sold by each salespeople by dealership

```
SELECT COUNT(CAR.vin) AS 'Number of Cars Sold', SALESPERSON.salesperson_id AS 'Salesperson ID', DEALERSHIP.location AS 'Dealership' FROM CAR JOIN DEALERSHIP ON CAR.dealership_id = DEALERSHIP.dealership_id JOIN SALESPERSON ON CAR.salesperson_id = SALESPERSON.salesperson_id GROUP BY DEALERSHIP.location, SALESPERSON.salesperson_id ORDER BY DEALERSHIP.location, COUNT(CAR.vin)
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

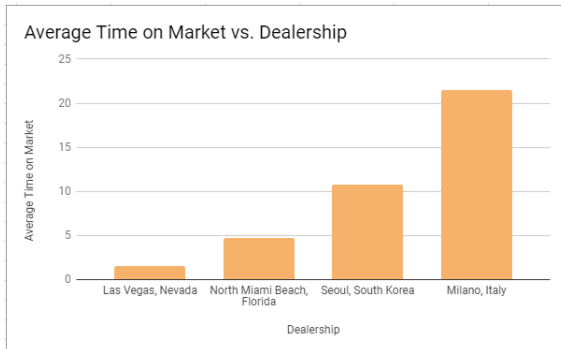
☐ Show all | Number of rows: 25 ▼ Filter rows:

+ Options

Number of Cars Sold	Salesperson ID	Dealership
12	2	Las Vegas, Nevada
31	7	Las Vegas, Nevada
7	11	Milano, Italy
12	9	Milano, Italy
28	10	Milano, Italy
3	3	North Miami Beach, Florida
34	6	North Miami Beach, Florida
172	8	North Miami Beach, Florida
39	5	Seoul, South Korea
68	1	Seoul, South Korea
94	4	Seoul, South Korea

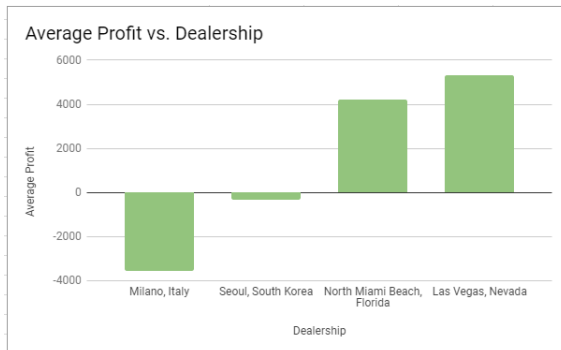
PART C: BUSINESS MEMO

The dealership that deserves expansion is definitively the Las Vegas branch. They consistently are the best at nearly everything. They have the best average market time sold, best average difference between sales price and asking price. It also has the highest average sales prices on cars out of all the other branches, which is 266855.91 versus second that is 255729.41, helping them make the highest average profit.



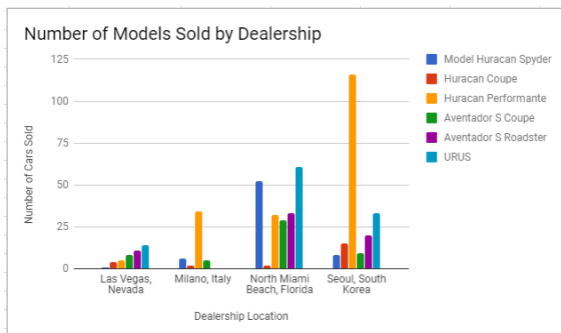
Average Time on Market

- Las Vegas branch has the least amount of time per average on the market (1.49 days) versus the next time that is North Miami Beach, Florida (4.71) which is a couple of days
- Las Vegas has the smallest time meaning that more cars can be sold faster maximizing profit
- Milano Italy takes by far more time than the other dealerships, taking 21.49 days.



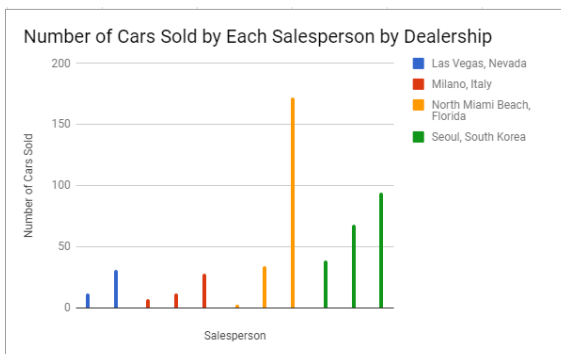
The Average Profit by Dealership

- Milano, Italy is losing a lot of profits and Seoul loses a little. However, Miami and Las Vegas are significantly making profit
- Las Vegas makes around 2000 dollars more in profits than Miami per average
- Las Vegas has the highest Average Profit (Difference between Sales Price and Ask Price)



The Number of Models Sold by Dealership

- The number of Models Sold by Dealership tells us that Las Vegas has a steady and a much closer proportion of sales of all the different cars that are sold
- Miami sold a lot of one type of car and
- The rest had ones that they sold a lot and a bunch they sold much less



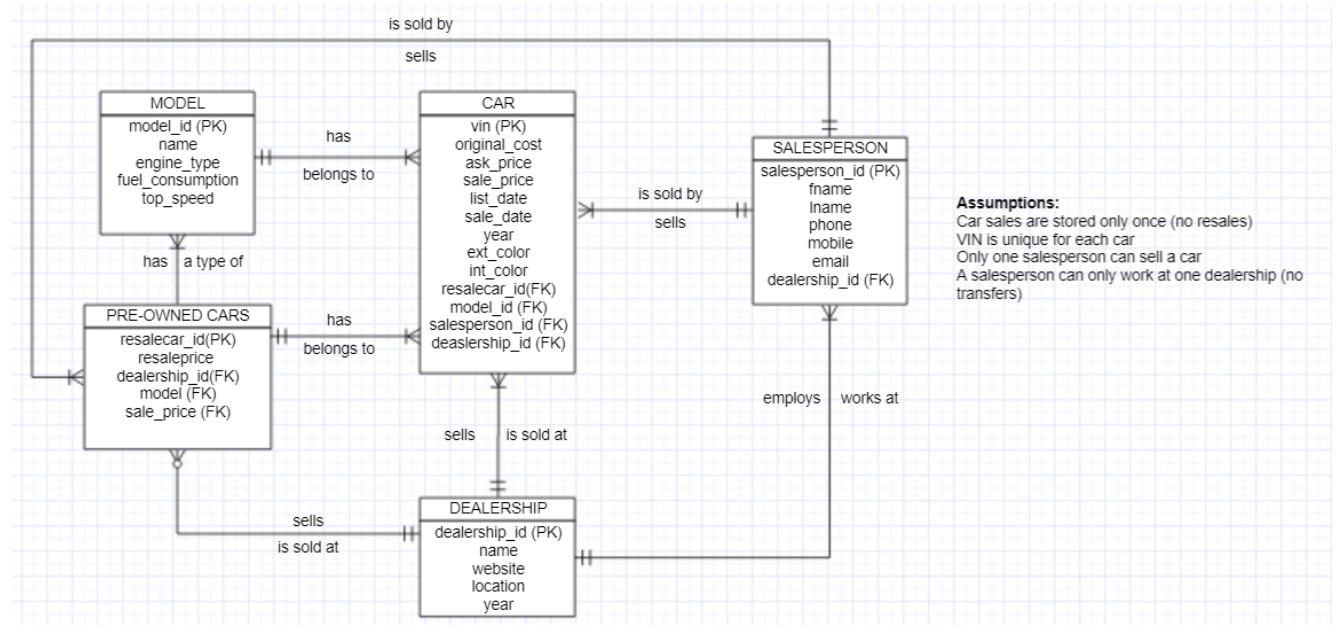
The Number of Cars Sold by Each Salesperson by Dealership

- Las Vegas has the least amount of salespeople (2 people vs. 3) and has around the same number of cars sold than Italy (Italy total sold 47 and Las Vegas sold 43) however they made the highest average profit
- Sold around the same number of cars as Italy but the sellout times were much faster
- Needs more people in Las Vegas, can make it more efficient especially since the dealership is doing so well already

Some additional data that would be good to have to make an informed decision would be to know how long a dealership has been around so that the newer branches could expand more, and how long a salesperson has been at the dealership to gauge the amount of experience that the salespeople have. It would also be good to have some information how much it would cost to expand per square mile for each area.

PART D: ADDITIONAL DATA CONSIDERATIONS

a.



b. Some additional analysis that we can do given this new information is:

- What is the difference between the original price and the sales price? This would be the true indicator of loss/gain that the dealership has.
- How different are the original prices to the ask price? This would be a big indication of potential profit that each dealership could be making or an indication of how well they are doing.
- How different are the sale prices to the re-sale prices? This would just be a good indicator for if the dealership is making profit selling the older cars.

c.

```
SELECT ROUND(AVG(CAR.original_price - CAR.sale_price))
FROM CAR
ORDER BY AVG(CAR.original_price - CAR.sale_price)
```