

SAK Auto Auctions
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Stage 3: tables, queries and updates

*****Create database and load tables*****

```
mysql> create database SAKAutoAuctions;  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> use SAKAutoAuctions  
Database changed
```

/*used "\. <file.sql>" to create and populate tables*/

```
mysql> show tables;
```

```
+-----+  
| Tables_in_SAKAutoAuction |  
+-----+  
| Auction_Automobile      |  
| Auctioneer              |  
| Bid_Rep                  |  
| Driver                   |  
| Employee                 |  
| Location                 |  
+-----+
```

6 rows in set (0.00 sec)

*****describe the 6 tables*****

```
mysql> describe Auction_Automobile;
```

```
+-----+-----+-----+-----+-----+-----+  
| Field | Type      | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| vin   | varchar(50) | NO   | PRI | NULL    |      |  
| color | varchar(50) | YES  |     | NULL    |      |  
| make  | varchar(50) | YES  |     | NULL    |      |  
| model | varchar(50) | YES  |     | NULL    |      |  
| owner | varchar(50) | YES  |     | NULL    |      |  
| year  | int(11)    | YES  |     | NULL    |      |  
| title | varchar(12) | YES  |     | NULL    |      |  
| trans | varchar(8)  | YES  |     | NULL    |      |  
| lot_num | int(11)    | YES  | MUL | NULL    |      |  
| reserve | int(11)    | YES  |     | NULL    |      |  
| mileage | int(11)    | YES  |     | NULL    |      |  
+-----+-----+-----+-----+-----+-----+
```

mysql> describe Auction_Automobile;

Field	Type	Null	Key	Default	Extra
vin	varchar(50)	NO	PRI	NULL	
color	varchar(50)	YES		NULL	
make	varchar(50)	YES		NULL	
model	varchar(50)	YES		NULL	
owner	varchar(50)	YES		NULL	
year	int(11)	YES		NULL	
title	varchar(12)	YES		NULL	
trans	varchar(8)	YES		NULL	
lot_num	int(11)	YES	MUL	NULL	
reserve	int(11)	YES		NULL	
mileage	int(11)	YES		NULL	

mysql> describe Bid_Rep;

Field	Type	Null	Key	Default	Extra
bssn	int(11)	YES	MUL	NULL	
sales_num	int(11)	YES		NULL	

mysql> describe Driver;

Field	Type	Null	Key	Default	Extra
dssn	int(11)	YES	MUL	NULL	
license_num	int(11)	YES		NULL	

mysql> describe Employee;

Field	Type	Null	Key	Default	Extra
ssn	int(11)	NO	PRI	NULL	
salary	int(11)	YES		NULL	
name	varchar(50)	YES		NULL	
address	varchar(50)	YES		NULL	
e_lot_number	int(11)	YES	MUL	NULL	

mysql> describe Location;

Field	Type	Null	Key	Default	Extra
-------	------	------	-----	---------	-------

```
| Nnum_cars_in_lot | int(11) | YES | | NULL | |
| rent | int(11) | YES | | NULL | |
| lot_size | int(11) | YES | | NULL | |
| l_address | varchar(50) | YES | | NULL | |
| lot_number | int(11) | NO | PRI | NULL | |
+-----+-----+-----+-----+-----+-----+
```

*****insert|update|delete*****

/*insert single tuple*/

```
mysql> insert into Auction_Automobile values ('1d7FC7ZAtemporary', 'Silver', 'Dodge', 'Dakota', 'keegan',
2005, 'clean', 'auto', 4, null, 131007);
Query OK, 1 row affected (0.06 sec)
```

/*show table with 911s, then delete one, show change, reinsert(for consistency)*/

```
mysql> select * from Auction_Automobile where model = '911';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| vin | color | make | model | owner | year | title | trans | lot_num | reserve | mileage |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1C3CC5FB1AN891726 | Orange | Porsche | 911 | dealer | 2008 | rebuilt | auto | 3 | NULL | 202549 |
| 1N6AF0LYXEN654421 | Mauv | Porsche | 911 | insurance | 1986 | rebuilt | auto | 5 | NULL | 14531 |
| SCBFC7ZA6EC752199 | Purple | Porsche | 911 | dealer | 1996 | junk | manual | 4 | NULL | 189007 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> delete from Auction_Automobile where vin = 'SCBFC7ZA6EC752199';
Query OK, 1 row affected (0.06 sec)
```

```
mysql> select * from Auction_Automobile where model = '911';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| vin | color | make | model | owner | year | title | trans | lot_num | reserve | mileage |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1C3CC5FB1AN891726 | Orange | Porsche | 911 | dealer | 2008 | rebuilt | auto | 3 | NULL | 202549 |
| 1N6AF0LYXEN654421 | Mauv | Porsche | 911 | insurance | 1986 | rebuilt | auto | 5 | NULL | 14531 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

/*temp tuples to do multi delete*/

```
mysql> insert into Auction_Automobile values ('5N1AA0NDtemporary', 'Black', 'Honda', 'Inspire', 'keegan',
1993, 'clean', 'auto', 1, null, 93379);
Query OK, 1 row affected (0.05 sec)
```

```
mysql> insert into Auction_Automobile values ('5N1AA486temporary', 'White', 'Chevrolet', 'G-Series G20',
'keegan', 1993, 'clean', 'auto', 1, null, 121379);
Query OK, 1 row affected (0.05 sec)
```

```
mysql> insert into Auction_Automobile values ('1d7FC7ZAtemporary', 'Silver', 'Dodge', 'Dakota', 'keegan',
2005, 'clean', 'auto', 4, null, 131007);
Query OK, 1 row affected (0.05 sec)
```

```
mysql> select * from Auction_Automobile where owner = 'keegan';
```

vin	color	make	model	owner	year	title	trans	lot_num	reserve	mileage
1d7FC7ZAtemporary	Silver	Dodge	Dakota	keegan	2005	clean	auto	4	NULL	131007
5N1AA0NDtemporary	Black	Honda	Inspire	keegan	1993	clean	auto	1	NULL	93379
5N1AA486temporary	White	Chevrolet	G-Series G20	keegan	1993	clean	auto	1	NULL	121379

```
3 rows in set (0.00 sec)
```

```
/*delete multi tuple (my temp cars)*/
```

```
mysql> delete from Auction_Automobile where vin in (
-> select vin from (select * from Auction_Automobile) as d
-> where d.owner = 'keegan');
```

```
Query OK, 3 rows affected (0.05 sec)
```

```
mysql> select * from Auction_Automobile where owner = 'keegan';
Empty set (0.00 sec)
```

```
/*updates all priuses with new owner*/
```

```
mysql> select * from Auction_Automobile where model = 'Prius';
```

vin	color	make	model	owner	year	title	trans	lot_num	reserve	mileage
5N1AA0ND1FN712067	Maroon	Toyota	Prius	NULL	2011	rebuilt	auto	1	NULL	160379
WA1VMBFP4EA914659	Orange	Toyota	Prius	NULL	2003	junk	auto	3	NULL	113489

```
2 rows in set (0.00 sec)
```

```
mysql> update Auction_Automobile set owner = '***DEVIL***' where vin = '5N1AA0ND1FN712067';
Query OK, 1 row affected (0.05 sec)
```

```
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql>
```

```
mysql> select * from Auction_Automobile where model = 'Prius';
```

vin	color	make	model	owner	year	title	trans	lot_num	reserve	mileage
5N1AA0ND1FN712067	Maroon	Toyota	Prius	***DEVIL***	2011	rebuilt	auto	1	NULL	160379
WA1VMBFP4EA914659	Orange	Toyota	Prius	NULL	2003	junk	auto	3	NULL	113489

2 rows in set (0.00 sec)

/*update multiple*/

mysql> update Auction_Automobile set owner = '***SatanOwnsAPrius***' where vin in (

-> select vin from (select * from Auction_Automobile) as u where u.model = 'Prius');

Query OK, 2 rows affected (0.05 sec)

Rows matched: 2 Changed: 2 Warnings: 0

mysql>

mysql> select * from Auction_Automobile where model = 'Prius';

vin	color	make	model	owner	year	title	trans	lot_num	reserve	mileage
5N1AA0ND1FN712067	Maroon	Toyota	Prius	***SatanOwnsAPrius***	2011	rebuilt	auto	1		
WA1VMBFP4EA914659	Orange	Toyota	Prius	***SatanOwnsAPrius***	2003	junk	auto	3		

*****Queries*****

/*

1. Multiple

Return the Name and Salary of All employees who are Auctioneers.

*/

mysql> select name, salary

-> from Employee, Auctioneer

-> where assn = ssn;

name	salary
Dominick Rouch	101965
Tobey Bunday	90446
Jorey Gronowe	118231
Garnet Hourahan	121095
Missy Bednell	118108
Francene Benkhe	121235
Gerrie Kinloch	124468
Madelin Pelzer	37220
Shannen Plascott	120547
Wyatan Merrifield	117528

10 rows in set (0.00 sec)

/*

2. Corrollated

Return Make and model of vehicles that are in lot #3 with less than 10,000 miles.

*/

```
mysql> select make,model
-> from Auction_Automobile a1
-> where a1.mileage < 10000 and a1.year in
-> (select year
-> from Auction_Automobile a2, Location
-> where lot_number='3');
```

make	model
Hyundai	Elantra
Ford	E-Series
Acura	NSX
Jeep	Liberty
MINI	MINI
Volkswagen	Touareg
Ford	F350
GMC	Yukon
Mercedes-Benz	C-Class
Nissan	Xterra
Honda	Element
Audi	Q5
Honda	Passport
BMW	8 Series
Hyundai	Scoupe
Chevrolet	Suburban 2500
GMC	2500 Club Coupe
Toyota	4Runner
Mitsubishi	Mirage
Toyota	Camry
Hyundai	Elantra
Buick	Special
Austin	Mini

23 rows in set (0.00 sec)

```
/*
# 3. Uncorrolated Nested
# Return addresses of all employees who are drivers.
*/
```

```
mysql> select address
-> from Employee e1
-> where e1.ssn in (select ssn
-> from Employee, Driver
-> where ssn=dssn);
```

address
0393 Browning Trail

65 Union Parkway	
15574 Dapin Road	
4924 Vermont Terrace	
98 Florence Pass	
06 Burrows Avenue	
14918 Huxley Circle	
744 Dunning Court	
9 Milwaukee Parkway	
75 Heath Way	
75 Weeping Birch Pass	
25 Caliangt Place	
6480 Atwood Plaza	
8027 Southridge Place	
47262 Donald Way	
40 Fisk Parkway	
11 Dennis Avenue	
6710 Vernon Plaza	
752 Almo Drive	
43158 Riverside Circle	
693 Barby Terrace	
74021 Veith Lane	

+-----+
22 rows in set (0.00 sec)

```

/*
#4. Query using MINUS
# Return ssn's of employees who are NOT drivers.
*/

```

```

select ssn
from Employee
MINUS
select ssn
from Employee, Driver
where ssn=dssn;

```

*****perform on noy mysql(no minus support)

```

/*
# 5. Query using in
# Return Make, Model, and Color of all vehicles that are located on Lot 2
*/

```

```

mysql> select Make, Model, color
-> from Auction_Automobile a1
-> where a1.lot_num in (select lot_num
-> from Auction_Automobile
-> where lot_num='2')
-> ;

```

Make	Model	color
Chevrolet	Blazer	Turquoise
Dodge	Caravan	Aquamarine
Mercury	Sable	Fuscia
Lexus	IS F	Purple
Bentley	Continental	Puce
Aston Martin	Vantage	Orange
BMW	Z4	Red
Lincoln	MKT	Turquoise
Dodge	Stratus	Orange
Mercedes-Benz	W201	Mauv
Chevrolet	Venture	Indigo
Dodge	Neon	Violet
Chevrolet	Camaro	Violet
Plymouth	Grand Voyager	Indigo
Jeep	Wrangler	Khaki
Lexus	SC	Maroon
Audi	A6	Puce
Honda	Element	Crimson
Pontiac	Firefly	Purple
Pontiac	6000	Goldenrod
Audi	5000S	Teal
Scion	FR-S	Maroon
Saturn	VUE	Turquoise
Hyundai	Sonata	Aquamarine
Buick	Rendezvous	Yellow
Ford	Econoline E250	Turquoise
Chevrolet	Corvette	Violet
Aston Martin	V8 Vantage	Blue
Jeep	Grand Cherokee	Khaki
Chevrolet	Suburban 2500	Maroon
Lamborghini	Aventador	Puce
Mitsubishi	Galant	Maroon
Mitsubishi	Raider	Green
Dodge	Ram Wagon B350	Mauv
Chrysler	Town & Country	Yellow
Toyota	4Runner	Red
Mercedes-Benz	W201	Indigo
Lincoln	MKZ	Red
Suzuki	Aerio	Fuscia
Suzuki	Samurai	Mauv
Honda	Civic	Yellow
Scion	xB	Khaki
Mazda	B-Series Plus	Yellow
Dodge	Ram 1500	Mauv
Jaguar	XJ	Orange

Honda	Civic Si	Aquamarine	
Pontiac	Parisienne	Red	
Chrysler	300M	Mauv	
GMC	Suburban 2500	Pink	
Subaru	Impreza	Yellow	
Mazda	B2500	Puce	
BMW	8 Series	Mauv	
Honda	S2000	Green	
Hyundai	XG350	Green	
Toyota	Tacoma Xtra	Red	
Mercedes-Benz	300SE	Mauv	
Ford	Aspire	Pink	
Mercedes-Benz	CLK-Class	Purple	
Spyker	C8	Crimson	
Bentley	Azure	Mauv	
BMW	Z4 M	Goldenrod	
Honda	Odyssey	Maroon	
Acura	Legend	Indigo	
Lexus	SC	Green	
Mercedes-Benz	CL-Class	Maroon	
Chrysler	PT Cruiser	Mauv	
Chevrolet	Express 1500	Blue	
Ford	E-Series	Puce	
Lincoln	Town Car	Orange	
Dodge	Charger	Yellow	
Hyundai	Elantra	Maroon	
MINI	Clubman	Red	
Ram	C/V	Pink	
Suzuki	Aerio	Khaki	
Chevrolet	Suburban 1500	Red	
Chevrolet	Uplander	Fuscia	
Mercedes-Benz	C-Class	Violet	
GMC	Envoy	Blue	
Chevrolet	Express 3500	Yellow	
Acura	Legend	Blue	
Ford	E250	Puce	
Nissan	Murano	Turquoise	
Kia	Sorento	Crimson	
Plymouth	Neon	Red	
Acura	Legend	Maroon	
Chevrolet	Express 3500	Puce	
GMC	Canyon	Red	
Toyota	4Runner	Fuscia	
Hyundai	Sonata	Turquoise	
Ford	Econoline E150	Fuscia	
Scion	tC	Violet	
Buick	Skyhawk	Yellow	
Chevrolet	G-Series G20	Puce	

```
+-----+-----+-----+
93 rows in set (0.00 sec)
```

```
/*
# 6. Query using group by and aggregate and having
# Return a count of each vehicle make that is listed in the roster
with more than 10 of those cars
*/
mysql> select make, count(*)
-> from Auction_Automobile a1
-> group by make
-> having count(*) > 10;
```

```
+-----+-----+
| make      | count(*) |
+-----+-----+
| Acura      | 12 |
| Audi       | 16 |
| BMW        | 12 |
| Chevrolet  | 44 |
| Dodge      | 27 |
| Ford       | 40 |
| GMC        | 23 |
| Honda      | 16 |
| Hyundai    | 16 |
| Lexus      | 12 |
| Mercedes-Benz | 15 |
| Mercury    | 11 |
| Mitsubishi | 18 |
| Nissan     | 17 |
| Pontiac    | 16 |
| Toyota     | 24 |
| Volkswagen | 16 |
+-----+-----+
17 rows in set (0.02 sec)
```

```
/*
# 7. Query using INTERSECT
# Return names of Owners whose vehicles are on lot #4 and their titles are CLEAN
*/
SELECT vin, owner FROM Auction_Automobile WHERE title = 'clean'
INTERSECT
select vin, owner from auction_automobile where lot_num = '4';
*****perform on noy mysql(no intersect support)
```

```
/*
# 8. Query using UNION
# Return unique VINs of vehicles manufactured by Toyota or vehicles with automatic
```

transmission

*/

SELECT VIN FROM Auction_Automobile WHERE make = 'Toyota'

UNION

select VIN from auction_automobile where trans = 'auto';

*****perform on noy mysql(no UNION support)

/*

9. Query using sort by (ORDER BY)

Return names and addresses for all employees whose salary is greater than \$90,000

*/

mysql> select name, address

-> from Employee

-> where salary > 90000

-> ORDER by name;

name	address
Alexa Coweuppe	4 Spohn Center
Alexa Petigrew	81610 Oriole Way
Dallas Beden	02044 Meadow Valley Point
Dominick Rouch	7673 Milwaukee Alley
Dulcy Dreamer	084 Tony Plaza
Florrie Lewty	3408 Transport Point
Francene Benkhe	292 Erie Trail
Garnet Hourahan	82645 Springview Pass
Gerrie Kinloch	4 Emmet Crossing
Irvin Cheale	683 Bayside Park
Jorey Gronowe	36 Hazelcrest Pass
Missy Bednell	39527 Lukken Pass
Perri Wadly	70536 Express Terrace
Sampson Gilling	06 Rusk Center
Shannen Plascott	30426 Parkside Drive
Spenser Rikel	61 Superior Way
Tobey Bunday	03 Truax Point
Wyatan Merrifield	38 American Ash Lane
Yvon Grinnikov	43158 Riverside Circle

19 rows in set (0.01 sec)

/*

10. Query using all

Return make and model of all vehicles if all titles are clean.

*/

mysql> select make, model

-> from Auction_Automobile

-> where title = all (select title

-> from Auction_Automobile

-> where title = 'clean');

+-----+	
make	model
+-----+	
Chevrolet	Blazer
Saab	900
Ford	Econoline E150
Chrysler	Cirrus
Lamborghini	Gallardo
Land Rover	Range Rover
Aston Martin	Vantage
Mercedes-Benz	S-Class
GMC	Suburban 1500
Dodge	Stratus
Subaru	Loyale
Pontiac	G8
Ford	E-Series
Mercedes-Benz	GLK-Class
Scion	tC
Nissan	Pathfinder
Kia	Forte
Buick	Rendezvous
Volkswagen	Cabriolet
Kia	Spectra
Ford	Econoline E250
Oldsmobile	88
Buick	Special
Suzuki	Grand Vitara
Porsche	Boxster
Toyota	Corolla
Suzuki	Aerio
Lamborghini	Gallardo
Bentley	Azure
Isuzu	Rodeo
BMW	M
Honda	Civic Si
Ford	Escort
Chevrolet	Venture
Chrysler	300M
Toyota	4Runner
Ford	Thunderbird
Saturn	Ion
GMC	1500 Club Coupe
Nissan	Altima
Toyota	RAV4
Chevrolet	Silverado 3500
Chrysler	New Yorker

Mazda	Mazda2
Ford	E-Series
Chevrolet	G-Series 1500
Chevrolet	Silverado 2500
Mitsubishi	Eclipse
Mercury	Mountaineer
Land Rover	Range Rover Sport
Honda	CR-V
Kia	Sorento
Toyota	4Runner
Infiniti	FX
Dodge	Dakota Club
Hyundai	Azera
Pontiac	Grand Prix
Chrysler	Cirrus
Chevrolet	G-Series G20

+-----+
59 rows in set (0.01 sec)

```
/*
11. not in
Return the Name of all employees who are not Auctioneers.
*/
```

```
mysql> select name
-> from Employee
-> where ssn not in (select assn
-> from Auctioneer);
```

name
Mirabelle Hourston
Dulcy Dreamer
Allianora Oldall
Lacee Coupar
Betteanne Mogenot
Irvin Cheale
Pierson Witcherley
Aylmar Fourmy
Grannie McVrone
Marilee Livingstone
Abagael Dussy
Tobe Ricketts
Florrie Lewty
Addie Champkin
Susana Raff
Spenser Rikel
Wylie Oblein
Luigi Bissett

Nariko Gilley	
Alexa Coweuppe	
Phebe Caban	
Delbert Jeromson	
Evie Devers	
Perri Wadly	
Tabby Vlies	
Florette Bromage	
Lilias Shepperd	
Anjanette McCumesky	
Berthe Gammade	
Devonne Sussans	
Alexa Petigrew	
Torrey Hauxwell	
Walker Crumly	
Sampson Gilling	
Sorcha Lorraine	
Dugald Dalby	
Dallas Beden	
Yvon Grinnikov	
Bethena Siddele	
Wash Perrot	

+-----+
40 rows in set (0.02 sec)

```

/*
12. exists
Return the lot number of lots with unknown owner cars
*/

```

```

mysql> select lot_number
-> from Location
-> where exists (select *
->               from Auction_Automobile
->               where owner is Null);

```

lot_number	
1	
2	
3	
4	
5	

+-----+
5 rows in set (0.03 sec)

```

/*
13. not exists
Return the vin, make, model, and year of cars with more than 245,000 miles

```

*/

```
mysql> select vin, make, model, year
-> from Auction_Automobile as aa1
-> where not exists (select *
-> from Auction_Automobile as aa2
-> where aa1.vin = aa2.vin and mileage < 245000);
```

```
+-----+-----+-----+-----+
| vin      | make   | model  | year |
+-----+-----+-----+-----+
| 1FTNX2A50AE285033 | Ford   | F150   | 2009 |
| 1G6AX5SX3F0949187 | Chevrolet | Camaro | 1995 |
| WA1WKBFP4BA866635 | GMC    | Sierra 2500 | 2005 |
| WAUKF78E86A357765 | Dodge  | Intrepid | 2002 |
| WAURGAFD7DN484404 | Lexus  | IS     | 2005 |
| WBA3C1C54CA834849 | Chevrolet | Express 3500 | 1998 |
| WBAUC9C50DV191803 | Lexus  | IS     | 2010 |
+-----+-----+-----+-----+
```

7 rows in set (0.00 sec)
