# **BEFORE CREATING TABLE**

[mysql> use auto; Database changed [mysql> show tables; Empty set (0.00 sec)

mysql> |

#### AFTER CREATING TABLE

[mysql> use auto; Database changed [mysql> show tables; Empty set (0.00 sec)

[mysql> show tables;

| Tables\_in\_auto |

| automobiles | models | options | optionsets

4 rows in set (0.00 sec)

mysql> 🎚

#### AFTER ADDING "Prius"

[mysql> select \* from automobiles;

++		·	+
			price
1 1	Toyota	Prius	18000
++			+

1 row in set (0.00 sec)

[mysql> select \* from optionsets;

i	id		name	i
ļ.	1	Ţ	Transmission	Ţ
ı	2	ı	Brakes	1

2 rows in set (0.00 sec)

[mysql> select \* from options;

+-		+-		++	
ļ	id	ļ	name	price	
1	1 2	1	Automatic Manual	0     -815	
1	3	1	Regular	0	
1	4	1	ABS	400	

4 rows in set (0.00 sec)

		lect * from	
i	autoid	optsetid	
ï	1	1	1
- Ì	1	1	2
-1	1	2	3
- i	1	1 2	1 / i

1 2 3 4 1 1 2 4 4 1 4 rows in set (0.00 sec)

mysql>

# AFTER ADDING "Lexus"

i	id	make	model	price
į	1	Toyota   Lexus	Prius	18000

2 rows in set (0.00 sec)

[mysql> select \* from optionsets;

id	name
1	Transmission
2	Brakes
3	Color
4	GPS
5	Power Moonroof

+---+ 5 rows in set (0.00 sec)

[mysql> select \* from options;

+		++
id	name	price
+		++
1	Automatic	0
2	Manual	-815
3	Regular	0
4	ABS	400
5	Black	0
6	Silver	0
7	White	0
8	Present	700
9	Not Present	0
10	Present	595
+		++

10 rows in set (0.00 sec)

[mysql> select \* from models;

autoid	optsetid	optid
1	1	1 1
1	j 1	j 2 j
1	j 2	ј з ј
1	2	4
2	j 3	5
2	] 3	6
2	] 3	7
2	4	8
2	4	9
2	5	10
2	5	9
+	+	++

11 rows in set (0.00 sec)

mysql> 📗

### AFTER ADDING "Focus"

11 rows in set (0.00 sec)

[mysql> select \* from automobiles;

Ī	id	1	make	model   pri	ice
1			Toyota Lexus Ford		900   985   145

[mysql> select \* from optionsets;

++	-
id   name	- !
1   Transmission   2   Brakes   3   Color   4   GPS   5   Power Moonroof   6   Side Impact Air Bags	

[mysql> select \* from options;

mysql>	select * from options;	
id	name	price
1 1	Automatic	0
2	Manual	-815
3	Regular	0
4	ABS	400
5	Black	0
6	Silver	0
7	White	0
8	Present	700
9	Not Present	0
10	Present	595
11	Fort Knox Gold Clearcoat Metallic	0
12	Liquid Grey Clearcoat Metallic	0
13	Infra-Red Clearcoat	0
14	Grabber Green Clearcoat Metallic	0
15	Sangria Red Clearcoat Metallic	0
16	French Blue Clearcoat Metallic	0
17	Twilight Blue Clearcoat Metallic	0
18	CD Silver Clearcoat Metallic	0
19	Pitch Black Clearcoat	0
20	Cloud 9 White Clearcoat	0
21	Standard	0
22	ABS with Advance Trac	1625
23	Present	350

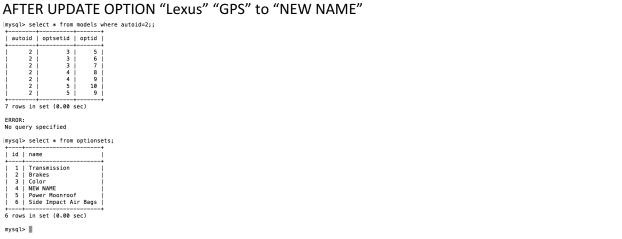
23 rows in set (0.00 sec)

mysql>

#### BEFORE UPDATE OPTION "Lexus" "GPS" to "NEW NAME"

		ect * from	
id	mak	e   model	price
2	Lexi	us   IS250	16985
		et (0.00 se	
nysql	> sel	ect * from	models
		optsetid	
	+		
	2	3	6
	2	3	7
	2	4 j	8
	2	4	9
	2	5	10
	2	5	9
		set (0.00 s	
row	5 1n :	set (0.00 s	ec)
vsal:	> sel	ect * from	options
id	name	e	i
	i		
3	Col	or	1
4			1
5	Powe	er Moonroof	1
row	s in :	set (0.00 s	ec)
nysql	·		
/~:		an co.	· +h-

You can see that the original Option "GPS" has optid=4, which is (2, 4, 8/9) from models.



Since there was only one using the Option "GPS", it can directly update the Option name without worry. Notice that the original (2, 4, 8/9) from models is still the same (2, 4, 8/9)

# BEFORE UPDATING OPTION "Prius" "Transmission" to "optionset"

	et (0.00 se	automobile	where mode	l='Prius'	;							
id   make	e   model	price										
	ota   Prius											
+	et (0.00 se	-+										
	ect * from (	optionset:	here name=	'Transmiss	sion';							
id   name	e											
1   Tran	nsmission											
	et (0.00 se	c)										
	ect * from :											
	optsetid											
1	1	1										
1	1   2	2   3										
1	2	4										
2   2	3	5   6										
2 j	3	7										
2   2	4   4	8   9										
2	5 j	10										
2   3	5   3	9   11										
з ј	3	12										
3	3	13   14										
з ј	3	15										
3	3	16   17										
3 j 3 j	3 j 3 j	18										
3 j	3	19   20										
3	1	1   2										
3 j	2	21										
3	2	4   22										
з ј	6	23										
3	6   5	9   10										
3	5	9										

The original is (1, 1, 1/2) from models, notice there are other using "Transmission" (optset=1) such as (3, 1, 1) from models. Thus, it'll have to create a new Option and change that name to "optionset" so it won't update the other one that's using "Transmission".

# AFTER UPDATING "Prius" "Transmission" TO "optionset"

[mysql> se	lect * from	models;
autoid	optsetid	optid
1	7	1
1	7	2
1	2	2   3   4
1	7 7 7 2 2 2 3 3 3 3	4
2	3	5
2	3	6
2		7
2	4	8
j 2	4	j 9 j
j 2	5	10
j 2	5	j 9 j
j 3	3	11
j 3	3	12
j 3	ј 3	13
j 3	5 5 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14
j 3	j 3	15
i 3	3	16
i 3	3	17 i
i 3	i 3	18 i
i 3	3	19
i 3	3	20
i 3	1	i 1 i
i 3	i 1	2
i 3	i 2	21
i s	2 2 2	4 1
i 3	j 2	22
j 3	6	23
j 3	6	j 9 j
1	5	10
j 3	5	9
30 rows in	set (0.00	sec)

[mysql> select \* from optionsets;

+	·
id	name
1	Transmission
2	Brakes
j 3	Color
4	NEW NAME
j 5	Power Moonroof
6	Side Impact Air Bags
7	optionset
+	
7 rows	s in set (0.00 sec)

mvsal> II

The original was (1, 1, 1/2) models, but it has now changed to (1, 7, 1/2) since there was another using the OptionSet "Transmission", needed to add the new OptionSet "optionset" for Pirus (notice that there's the extra new Optionset) to avoid changing OptionSet name for the other model too

#### BEFORE UPDATING PRICE "Lexus" "NEW NAME" "Present" from \$700 to \$1050

id	name	price
1	Automatic	0
2	Manual	-815
3	Regular	0
4	ABS	400
5	Black	0
6	Silver	0
7	White	0
8	Present	700
9	Not Present	0
10	Present	595
11	Fort Knox Gold Clearcoat Metallic	0
12	Liquid Grey Clearcoat Metallic	0
13	Infra-Red Clearcoat	0
14	Grabber Green Clearcoat Metallic	0
15	Sangria Red Clearcoat Metallic	0
16	French Blue Clearcoat Metallic	0
17	Twilight Blue Clearcoat Metallic	0
18	CD Silver Clearcoat Metallic	0
19	Pitch Black Clearcoat	0
20	Cloud 9 White Clearcoat	0
21	Standard	0
22	ABS with Advance Trac	1625
23	Present	350

23 rows in set (0.00 sec)

[mysql> select \* from models where optid=8;

	auto							
								i
+-			-+			+		 -+
1	row	in	cot	(0	aa		(2)	

mvsal>

Only one using the option (Present, \$700)

# AFTER UPDATING PRICE "Lexus" "NEW NAME" "Present" from \$700 to \$1050

id	name	price
1	Automatic	0
2	Manual	-815
3	Regular	0
4	ABS	400
5	Black	0
	Silver	0
7	White	0
8	Present	1050
9	Not Present	0
10	Present	595
11	Fort Knox Gold Clearcoat Metallic	0
12	Liquid Grey Clearcoat Metallic	0
13	Infra-Red Clearcoat	0
14	Grabber Green Clearcoat Metallic	0
15	Sangria Red Clearcoat Metallic	0
16	French Blue Clearcoat Metallic	0
17	Twilight Blue Clearcoat Metallic	0
18	CD Silver Clearcoat Metallic	0
19	Pitch Black Clearcoat	0
20	Cloud 9 White Clearcoat	0
21	Standard	0
22	ABS with Advance Trac	1625
23	Present	350

autoid	+	optid
2		8
1 row in	set (0.00 se	c)

. .

Again, only one model was using the same option, so just updating the price directly will do.

# BEFORE UPDATING "Focus" "Power Moonroof" "Present" from \$595 to \$777

·								
aut	oid	optsetid	optid					
	2   5   10							
	3	1 5	10 1					
			++					
2 row	s in	set (0.00	sec)					
nysql	sel	lect * from	options;					
id	+   nan	ne		+   price				
	+			+				
1		tomatic		0				
2		nual		-815				
3		gular		0				
4	ABS			400				
5	Bla			0				
6		lver		0				
7		White						
8		esent		1050				
9		t Present		0				
10		esent		595				
11			d Clearcoat Metallic	0				
12			learcoat Metallic	0				
13		fra-Red Cle		0				
14			Clearcoat Metallic	0				
15		Sangria Red Clearcoat Metallic						
16		French Blue Clearcoat Metallic						
17		Twilight Blue Clearcoat Metallic						
18		CD Silver Clearcoat Metallic   Pitch Black Clearcoat						
19				0				
20		oud 9 White	Clearcoat	0				
21		andard	_	0				
22		with Adva	nce Trac	1625				
23	Pre	esent		350				

[mysql> select \* from models where optid=10;

23 rows in set (0.00 sec)

mysql:

There are multiple using option (Present, \$595), so it'll have to create a new Option.

# AFTER UPDATING "Focus" "Power Moonroof" "Present" from \$595 to \$777

[mysql> select \* from models where optid=10; +-----+ | autoid | optsetid | optid |

[mysql> select \* from options;

+	t	++
id	name	price
1	Automatic	0
j 2	Manual	-815
3	Regular	0
4	ABS	400
5	Black	0
6	Silver	0
7	White	0
8	Present	1050
9	Not Present	0
10	Present	595
11	Fort Knox Gold Clearcoat Metallic	0
12	Liquid Grey Clearcoat Metallic	0
13	Infra-Red Clearcoat	0
14	Grabber Green Clearcoat Metallic	0 1
15	Sangria Red Clearcoat Metallic	0
16	French Blue Clearcoat Metallic	0 1
17	Twilight Blue Clearcoat Metallic	0 1
18	CD Silver Clearcoat Metallic	0
19	Pitch Black Clearcoat	0
20	Cloud 9 White Clearcoat	0 1
21	Standard	0
22	ABS with Advance Trac	1625
23	Present	350
24	Present	777
+	+	++

24 rows in set (0.00 sec)

[mysql> select \* from models where optid=24;

i	autoid	i	optsetid	i	optid	
ī	3	ï	5	•	24	

1 row in set (0.00 sec)

mysql> |

The original other one that was using (Present, 595) remains the same while it created a new Option for "Focus" "Power Moonroof" to have (Present, 777)

#### **BEFORE DELETING "Focus"**

[mysql> select \* from automobiles;

	make		
1 2	Toyota	Prius	18000
	Lexus	IS250	16985

2 rows in set (0.00 sec)

[mysql> select \* from optionsets;

į	id	name	į
1	2 3 4 5 7	Brakes Color NEW NAME Power Moonroof optionset	

5 rows in set (0.00 sec)

mysql>	select * from	options
id	name	price
1	Automatic	0
2	Manual	-815
3	Regular	0
4	ABS	400
5	Black	0
6	Silver	0
7	White	0
8	Present	1050
9	Not Present	0 1
10	Present	595
++		

10 rows in set (0.00 sec)

mysql> 🎚

# AFTER DELETING "Focus"

[mysql>	select	*	from	automobiles;
im) ad c.	50000			aacomobi cco,

id	make	model	price
1	Toyota Lexus	Prius	18000

2 rows in set (0.00 sec)

[mysql> select \* from optionsets;

ļ	id	ļ	name	ļ
ï	2	Ĭ	Brakes	ĭ
Ĺ	3	Ĺ	Color	ĺ
Ĺ	4	Ť	NEW NAME	ĺ
ı	5	1	Power Moonroof	١
ı	7	Ť.	optionset	ĺ

7 | optionset | +---+ 5 rows in set (0.00 sec)

[mysql> select \* from options;

4	L	
id	name	price
1	Automatic	0
j 2	Manual	-815
j 3	Regular	j 0 j
4	ABS	400
5	Black	0
6	Silver	0
7	White	j 0 j
8	Present	1050
9	Not Present	0
10	Present	595
4		

10 rows in set (0.00 sec)

mysql> 🎚

#### AFTER DELETING "Prius"

[mysql> select \* from automobiles;

			price
2	Lexus	IS250	16985

1 row in set (0.00 sec)

L	Iu	1	Halle	1
+-		+-		+
	3		Color	
	4		NEW NAME	
1	5		Power Moonroof	1

+---+ 3 rows in set (0.00 sec)

[mysql> select \* from options;

id	name	price
5   6   7   8   9	Black   Silver   White   Present   Not Present   Present	0   0   0   1050   0
-		0 595

6 rows in set (0.00 sec)

mysql>

# AFTER DELETING "Lexus" (the last one)

[mysql> select \* from automobiles; Empty set (0.00 sec)

[mysql> select \* from optionsets; Empty set (0.00 sec)

[mysql> select \* from options; Empty set (0.00 sec)

mysql> 🎚

#### AFTER DELETING ALL THE TABLES

[mysql> select \* from automobiles; Empty set (0.00 sec)

[mysql> select \* from optionsets; Empty set (0.00 sec)

(mysql> select \* from options; Empty set (0.00 sec)

(mysql> show tables; Empty set (0.00 sec)

mysql>