

How to split table into multiple tables using SQL

Hi I have this table Cars:

0
MODEL nvarchar(20)
STYLE nvarchar(20)
ENGINE nvarchar(5)
CAPACITY smallint
MAX_SPEED smallint
PRICE smallmoney
★
1 MARKET nvarchar(20)
COMPETITOR nvarchar(20)

And I would like to split it into 3 tables via SQL query:

Cars:

```
MODEL nvarchar(20)
STYLE nvarchar(20)
MAX_SPEED smallint
PRICE smallmoney
```

Engine:

```
ENGINE nvarchar(5)
CAPACITY smallint
```

Market:

```
MARKET nvarchar(20)
COMPETITOR nvarchar(20)
```

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I removed the MySQL tag because `smallmoney` clearly indicates SQL Server syntax. – [Gordon Linoff](#) Dec 18 '13 at 2:12

Of course it's possible... so the answer to your question is "YES"... was that it? – [sam yi](#) Dec 18 '13 at 2:13

I think you're trying to ask how to normalize it. Homework? – [sam yi](#) Dec 18 '13 at 2:14

@samyi Have edited the question sorry, I have already set out how I am going to normalise the table as stated by the new tables. I just don't know the sql commands to do it – [Anjola](#) Dec 18 '13 at 2:18

start by creating new tables, then select data into them. can you do that and post what you have done. – [vasin1987](#) Dec 18 '13 at 2:24

4 Answers



Easiest way. Select... Into will create new tables:

2



```
SELECT DISTINCT
    ENGINE,
    CAPACITY
INTO Engine
FROM CARS
```

```
SELECT DISTINCT
    MARKET,
    COMPETITOR
INTO Market
FROM CARS
```

Then just drop the defunct columns from the original table. Eg

```
ALTER TABLE Cars DROP COLUMN ENGTNE
```

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This will do specifically what you are asking. However, I'm not sure that is what you want - there is then no reference from the car to the engine or market details - so information is lost.

If "ENGINE" and "MARKET" define the keys of the new table, I'd suggest leaving those columns on the car table as foreign keys. Eg only DROP Capacity and Competitor.


You may wish to create the primary key on the new tables too. Eg: ALTER TABLE ENGINE ADD CONSTRAINT [PK_Engine] PRIMARY KEY CLUSTERED ENGINE ASC

answered Dec 18 '13 at 2:34

user2673617

this is exactly what i want to do (your second paragraph) but I thought i'd have to split the tables first then add foreign after the split – [Anjola](#) Dec 18 '13 at 2:42

Even though this is the accepted answer I feel that it is lacking in usefulness as it has no id fields, or links to the original table. – [Scary Wombat](#) Dec 18 '13 at 4:26

Yes, that goes back to both the original question and original table. And the last line did indicate how to add a primary key. And ignoring DB snobbery, for a small system, what is wrong with a string primary key/foreign key? It wasn't intending on solving / teaching overall DB design to someone new. So thanks indeed for voting me down for answering correctly on a question you didn't ask. – user2673617 Dec 18 '13 at 5:09 

Run this....

1

```
create table Engine
(
    EngineId int identity(1,1) not null primary key,
    Engine nvarchar(5) not null,
    Capacity smallint not null
)
go
```

```
insert into Engine
(Engine, Capacity)
```

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```
update Cars
set Cars.EngineId = e.EngineId
from Engine e where e.Engine = Cars.Engine
go

create table Market
(
    Id int identity(1,1) not null primary key,
    Market nvarchar(20) not null,
    Competitor nvarchar(20) not null
)
go

insert into Market
(Market, Competitor)
(select distinct Market,Competitor from Cars)
go

alter table Cars
add MarketId int null
go

update Cars
set Cars.MarketId = m.MarketId
from Market m where m.Market = Cars.Market
go

alter table Cars
drop column Market;

alter table Cars
drop column Competitor;

alter table Cars
drop column Engine;

alter table Cars
```

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Yes it is possible and it is called "Normalization".

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answered Dec 18 '13 at 2:17



anonymous

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Your answer does not provide any useful information for the OP. If you will, you can add an example of normalization – [Philippe Hebert](#) Dec 17 '17 at 20:25

To normalize these tables you will firstly need to create new tables, write SQL to insert the data into the new tables and then alter the original table.

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See <http://technet.microsoft.com/en-us/library/ms174979.aspx> and [http://technet.microsoft.com/en-us/library/dd776381\(v=sql.105\).aspx](http://technet.microsoft.com/en-us/library/dd776381(v=sql.105).aspx) and <http://msdn.microsoft.com/en-us/library/ms190273.aspx>

answered Dec 18 '13 at 2:19



Scary Wombat

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