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1.

```
CREATE TABLE  CountryLookup (
   CountryID INTEGER   PRIMARY KEY AUTOINCREMENT ,
   Name     CHAR (40)
);


CREATE TABLE AddressUsageLookup (
   AddressUsageCode      INTEGER   PRIMARY KEY,
   AddressUsageDescription CHAR (40)
);


CREATE TABLE Customer (
   CustomerNumber     INTEGER   PRIMARY KEY,
   SocialSecurityNumber CHAR (10),
   FirstName          CHAR (20),
   Surname            CHAR (20),
   Salutation         CHAR (5),
   PhoneNumber        CHAR (20)
);


CREATE TABLE StateLookup (
   StateID   INTEGER   PRIMARY KEY,
   CountryID INTEGER   REFERENCES CountryLookup (CountryID),
   Name     CHAR (40)
);


CREATE TABLE Address (
   AddressID INTEGER   PRIMARY KEY,
   Street    CHAR (40),
   City     CHAR (20),
   StateID   INTEGER   REFERENCES StateLookup (StateID),
   CountryID INTEGER   REFERENCES CountryLookup (CountryID),
   ZipCode   CHAR (20)
```

```sql
);

CREATE TABLE CustomerHasAddress (

  CustomerNumber   INTEGER REFERENCES Customer (CustomerNumber),

  AddressID        INTEGER REFERENCES Address (AddressID),

  AddressUsageCode INTEGER REFERENCES AddressUsageLookup (AddressUsageCode),

  PRIMARY KEY (

    CustomerNumber,

    AddressID

  )
);
```

2.

```sql
insert into CountryLookup VALUES(1 , 'Iran');

insert into CountryLookup VALUES(2 , 'Iraq');

insert into CountryLookup VALUES(3 , 'Turkey');


insert into AddressUsageLookup VALUES(1 , NULL);

insert into AddressUsageLookup VALUES(2 , NULL);

insert into AddressUsageLookup VALUES(3 , NULL);


insert into Customer VALUES( 1 ,

  '1119331056' ,

  'mohammad' ,

  'aghajani' ,

  'salam' ,

  '0912500231');
insert into Customer VALUES( 2 ,

  '1119331057' ,

  'arman' ,

  'pasha' ,

  'salam' ,

  '0912400231');
```

```sql
insert into Customer VALUES( 3 ,
    '1119331032' ,
    'iman' ,
    'tabrizian' ,
    'salam' ,
    '0912200231');


INSERT into StateLookup VALUES( 2 , 2 , 'second') ;

INSERT into StateLookup VALUES( 1 , 1 , 'second') ;

INSERT into StateLookup VALUES( 3 , 2 , 'third') ;



INSERT into Address VALUES( 1 , 'azadi' , 'tehran' , 1 , 1 , '0098' ) ;

INSERT into Address VALUES( 2 , 'AL Tahrir' , 'Baqdad' , 2 , 2 , '0097' ) ;

INSERT into Address VALUES( 3 , 'baghesh' , 'Ankara' , 2 , 3 , '0095' ) ;



INSERT INTO CustomerHasAddress VALUES ( 1 , 1 , 1);

INSERT INTO CustomerHasAddress VALUES ( 2 , 2 , 1);

INSERT INTO CustomerHasAddress VALUES ( 3 , 2 , 2);
```

3.

Add a column :

```sql
ALTER TABLE Customer ADD COLUMN PersonalID integer ;
```

Delete PersonalID Column from customer table :

```sql
ALTER TABLE Customer RENAME TO temp_table;


CREATE TABLE Customer (
    CustomerNumber      INTEGER   PRIMARY KEY,
    SocialSecurityNumber CHAR (10),
    FirstName          CHAR (20),
    Surname            CHAR (20),
    Salutation         CHAR (5),
```

```sql
    PhoneNumber        CHAR (20)
);


INSERT INTO Customer (
            CustomerNumber,

            SocialSecurityNumber,

            FirstName,

            Surname,

            Salutation,

            PhoneNumber

        )
        SELECT CustomerNumber,

            SocialSecurityNumber,

            FirstName,

            Surname,

            Salutation,

            PhoneNumber

        FROM temp_table;
DROP TABLE temp_table;
```

نکته : در این بخش نتوانستم از query مستقیم استفاده کنم و با ارور مواجه میشدم و مجبور شدم از این دستور استفاده کنم.

Drop table :

```sql
DROP TABLE CustomerHasAddress;
```

نکته: جداولی که ستون های آن ها کلید های خارجی ما بقی جداول هستند نمیتوانند حذف شوند

Drop database :

```sql
DROP  DATABASE company;
```


4.


```sql
SELECT * from Address WHERE AddressID > 1 ;

SELECT * from AddressUsageLookup WHERE AddressUsageCode > 1 ;

SELECT * from CountryLookup WHERE Name = 'Iran' ;

SELECT * from Customer WHERE CustomerNumber > 1 and Salutation = 'salam' ;

SELECT * from CustomerHasAddress WHERE AddressUsageCode > 2 ;

SELECT name from StateLookup WHERE StateID > 1 ;
```

5.

UPDATE Customer SET Salutation = 'by' WHERE Salutation = 'salam' ;

DELETE from Customer WHERE FirstName = 'ali' ;

نکته : اگر داده در جدولی دیگر کلید خارجی باشد حذف نمی شود.

a)

SELECT FirstName , Surname , AddressUsageDescription From (

   SELECT * From (

     SELECT FirstName , Surname , AddressUsageCode FROM (

       SELECT * From Customer NATURAL JOIN CustomerHasAddress

)

) NATURAL JOIN AddressUsageLookup

) GROUP BY FirstName

b)

SELECT count(*) FROM CustomerHasAddress GROUP by CustomerNumber ;

c)

SELECT StateLookup.Name , CountryLookup.Name From (SELECT * FROM StateLookup , CountryLookup Where CountryLookup.CountryID = StateLookup.CountryID)

d)

SELECT * From Address WHERE CountryID = 1 and (StateID = 5 Or StateID = 6) ;

e)

SELECT * from Customer WHERE length(SocialSecurityNumber) = 5 ;

f)

SELECT * from Customer WHERE substr(SocialSecurityNumber,1 , 1) = '3' or substr(SocialSecurityNumber , 1 , 1) = '4' ;

g)

SELECT * From StateLookup where StateID not in (SELECT StateID From Address);

h)

SELECT CountryLookup.Name From (SELECT * from Address , CountryLookup where Address.CountryID = CountryLookup.CountryID) where Street = 23

i)

Select CustomerNumber , FirstName , Surname FROM Customer where FirstName = 'ali' and substr(PhoneNumber , 1 , 4) = '0912' ;

j)

```sql
SELECT Street From Address where CountryID = 1 ;
```