In [2]:

```
import sqlite3
import pandas as pd
```

In [3]:

```
connect = sqlite3.connect("dog.db")
```

In [4]:

```
cursor = connect.cursor()
```

In [191]:

```
cursor.execute("DROP TABLE IF EXISTS parents")
```

Out[191]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [192]:

```
cursor.execute("CREATE TABLE parents (parent VARCHAR(20), child VARCHAR(20));")
```

Out[192]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [193]:

```
cursor.execute('''
INSERT INTO parents
(parent, child)
VALUES ("abraham", "barack") UNION
VALUES ("abraham", "clinton") UNION
VALUES ("delano", "herbert") UNION
VALUES  ("fillmore", "abraham") UNION
VALUES ("fillmore", "delano") UNION
VALUES ("fillmore",   "grover") UNION
VALUES ("eisenhower", "fillmore");''')
```

Out[193]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [194]:

```
pd.read_sql_query('SELECT * FROM parents', connect)
```

Out[194]:

	parent	child
0	abraham	barack
1	abraham	clinton
2	delano	herbert
3	eisenhower	fillmore
4	fillmore	abraham
5	fillmore	delano
6	fillmore	grover

In [195]:

```
pd.read_sql_query('SELECT * FROM parents where parent="abraham" ', connect)
```

Out[195]:

	parent	child
0	abraham	barack
1	abraham	clinton

In [196]:

```
pd.read_sql_query("SELECT child FROM parents where child LIKE '%e%'", connect)
```

Out[196]:

	child
0	herbert
1	fillmore
2	delano
3	grover

In [197]:

```
d = pd.read_sql_query('SELECT DISTINCT parent FROM parents ORDER BY parent desc', connect)
d
```

Out[197]:

	parent
0	fillmore
1	eisenhower
2	delano
3	abraham

In [198]:

```
for i in range(len(d)-1,-1,-1):
    e = pd.read_sql_query('SELECT child FROM parents where parent="'+str(d.parent[i])+'"',
    if(len(e)>1):
        print(e,"\n")
```

```
     child
0   barack
1  clinton

     child
0  abraham
1   delano
2   grover
```

In [199]:

```
cursor.execute("DROP TABLE IF EXISTS dogs")
```

Out[199]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [200]:

```
query = '''CREATE TABLE dogs AS
SELECT "abraham" AS name,"long" AS fur UNION
SELECT "barack","short" UNION
SELECT "clinton", "long" UNION
SELECT "delano", "long" UNION
SELECT "eisenhower", "short" UNION
SELECT "fillmore", "curly" UNION
SELECT "grover", "short" UNION
SELECT "herbert", "curly";'''
cursor.execute(query)
```

Out[200]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [214]:

```
pd.read_sql_query('SELECT COUNT(*) FROM dogs where fur="short"', connect)
```

Out[214]:

	COUNT(*)
0	3

In [219]:

```
pd.read_sql_query('SELECT parent FROM parents JOIN dogs WHERE parents.child=dogs.name AND d
```

Out[219]:

	parent
0	eisenhower
1	delano

In [232]:

```
par = pd.read_sql_query('SELECT parent,child,fur FROM parents JOIN dogs where parents.paren
chi = pd.read_sql_query('SELECT child,fur FROM parents JOIN dogs where parents.child=dogs.n
for i in range(0,len(par)):
    if(par.child[i]==chi.child[i]):
        if(par.fur[i]==chi.fur[i]):
            print(" child --> parent\n",chi.child[i],"-->",par.parent[i])
```

```
 child --> parent
 clinton --> abraham
```

In [204]:

```
cursor.execute("DROP TABLE IF EXISTS animals")
```

Out[204]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [205]:

```
query = '''create table animals as  select "dog" as kind, 4 as legs, 20 as weight union  se
cursor.execute(query)
```

Out[205]:

```
<sqlite3.Cursor at 0x1fb91c6e490>
```

In [213]:

```
pd.read_sql_query('SELECT kind, MIN(weight) FROM animals;', connect)
```

Out[213]:

	kind	MIN(weight)
0	parrot	6

In [207]:

```
pd.read_sql_query('SELECT AVG(legs),AVG(weight) FROM animals;',connect)
```

Out[207]:

	AVG(legs)	AVG(weight)
0	3.0	2009.333333

In [208]:

```
pd.read_sql_query('SELECT * FROM animals where legs>2 AND weight<20;', connect)
```

Out[208]:

	kind	legs	weight
0	cat	4	10
1	ferret	4	10

In [209]:

```
pd.read_sql_query('SELECT AVG(weight) FROM animals GROUP BY legs;',connect)
```

Out[209]:

	AVG(weight)
0	4005.333333
1	13.333333

In [ ]:

```

```

In [ ]:

```

```