In [3]:

```python
import sqlite3
con = sqlite3.connect("portal_mammals.sqlite")
cur =con.cursor()

for row in cur.execute('select * FROM species;'):
    print(row)

con.close()
```

```
('AB', 'Amphispiza', 'bilineata', 'Bird')
('AH', 'Ammospermophilus', 'harrisi', 'Rodent')
('AS', 'Ammodramus', 'savannarum', 'Bird')
('BA', 'Baiomys', 'taylori', 'Rodent')
('CB', 'Campylorhynchus', 'brunneicapillus', 'Bird')
('CM', 'Calamospiza', 'melanocorys', 'Bird')
('CQ', 'Callipepla', 'squamata', 'Bird')
('CS', 'Crotalus', 'scutalatus', 'Reptile')
('CT', 'Cnemidophorus', 'tigris', 'Reptile')
('CU', 'Cnemidophorus', 'uniparens', 'Reptile')
('CV', 'Crotalus', 'viridis', 'Reptile')
('DM', 'Dipodomys', 'merriami', 'Rodent')
('DO', 'Dipodomys', 'ordii', 'Rodent')
('DS', 'Dipodomys', 'spectabilis', 'Rodent')
('DX', 'Dipodomys', 'sp.', 'Rodent')
('EO', 'Eumeces', 'obsoletus', 'Reptile')
('GS', 'Gambelia', 'silus', 'Reptile')
('NL', 'Neotoma', 'albigula', 'Rodent')
('NX', 'Neotoma', 'sp.', 'Rodent')
('OL', 'Onychomys', 'leucogaster', 'Rodent')
('OT', 'Onychomys', 'torridus', 'Rodent')
('OX', 'Onychomys', 'sp.', 'Rodent')
('PB', 'Chaetodipus', 'baileyi', 'Rodent')
('PC', 'Pipilo', 'chlorurus', 'Bird')
('PE', 'Peromyscus', 'eremicus', 'Rodent')
('PF', 'Perognathus', 'flavus', 'Rodent')
('PG', 'Pooecetes', 'gramineus', 'Bird')
('PH', 'Perognathus', 'hispidus', 'Rodent')
('PI', 'Chaetodipus', 'intermedius', 'Rodent')
('PL', 'Peromyscus', 'leucopus', 'Rodent')
('PM', 'Peromyscus', 'maniculatus', 'Rodent')
('PP', 'Chaetodipus', 'penicillatus', 'Rodent')
('PU', 'Pipilo', 'fuscus', 'Bird')
('PX', 'Chaetodipus', 'sp.', 'Rodent')
('RF', 'Reithrodontomys', 'fulvescens', 'Rodent')
('RM', 'Reithrodontomys', 'megalotis', 'Rodent')
('RO', 'Reithrodontomys', 'montanus', 'Rodent')
('RX', 'Reithrodontomys', 'sp.', 'Rodent')
('SA', 'Sylvilagus', 'audubonii', 'Rabbit')
('SB', 'Spizella', 'breweri', 'Bird')
('SC', 'Sceloporus', 'clarki', 'Reptile')
('SF', 'Sigmodon', 'fulviventer', 'Rodent')
('SH', 'Sigmodon', 'hispidus', 'Rodent')
('SO', 'Sigmodon', 'ochrognathus', 'Rodent')
('SS', 'Spermophilus', 'spilosoma', 'Rodent')
('ST', 'Spermophilus', 'tereticaudus', 'Rodent')
('SU', 'Sceloporus', 'undulatus', 'Reptile')
('SX', 'Sigmodon', 'sp.', 'Rodent')
('UL', 'Lizard', 'sp.', 'Reptile')
('UP', 'Pipilo', 'sp.', 'Bird')
```

```
('UR', 'Rodent', 'sp.', 'Rodent')
('US', 'Sparrow', 'sp.', 'Bird')
('ZL', 'Zonotrichia', 'leucophrys', 'Bird')
('ZM', 'Zenaida', 'macroura', 'Bird')
```

Creating SQL Connection to SQLITE database

In [12]:

```python
import sqlite3
con = sqlite3.connect("portal_mammals.sqlite")
cur =con.cursor()

#RETURN all resultes of query

cur.execute('SELECT plot_id FROM plots WHERE plot_type="Control"')
print(cur.fetchall())

##RETURN first resultes of query

cur.execute('SELECT species FROM species WHERE taxa="Bird"')
print(cur.fetchone())

#be sure to close connection.

con.close()
```

```
[(2,), (4,), (8,), (11,), (12,), (14,), (17,), (22,)]
('bilineata',)
```

Converting Sqlite to dataframe.

In [14]:

```python
import pandas as pd
import sqlite3

#Read sqlite query results into a pandas Dataframe

con = sqlite3.connect("portal_mammals.sqlite")

df = pd.read_sql_query("SELECT * from surveys", con)

#Verify that result of sql query is stored in the dataframe
print(df.head())

con.close()
```

```
   record_id  month  day  year  plot_id species_id sex  hindfoot_length  \
0          1      7   16  1977        2         NL   M             32.0
1          2      7   16  1977        3         NL   M             33.0
2          3      7   16  1977        2         DM   F             37.0
3          4      7   16  1977        7         DM   M             36.0
4          5      7   16  1977        3         DM   M             35.0

   weight
0     NaN
1     NaN
2     NaN
3     NaN
4     NaN
```

1.Creating dataframe using Pandas

In [17]:

```python
from pandas import DataFrame

Cars={'Brand':['Honda Civic','Toyota Corolla','Ford Focus','Audi A4'],
      'Price':[22000,25000,27000,35000]
      }

df=DataFrame(Cars,columns=['Brand','Price'])
print(df)
```

```
            Brand  Price
0     Honda Civic  22000
1  Toyota Corolla  25000
2      Ford Focus  27000
3         Audi A4  35000
```

2.Creating databse to insert above dataFrame.

In [19]:

```python
import sqlite3

#created new databse TestDBI

conn=sqlite3.connect('TestDBI.db')
c=conn.cursor()

c.execute('CREATE TABLE CARS2(Brand text, Price number)')

conn.commit()
```

In [20]:

```python
df.to_sql('CARS2',conn,if_exists='replace',index=False)
df
```

Out[20]:

	Brand	Price
0	Honda Civic	22000
1	Toyota Corolla	25000
2	Ford Focus	27000
3	Audi A4	35000

In [21]:

```python
c.execute('''
SELECT Brand,max(Price) from CARS2
''')
```

Out[21]:

```
<sqlite3.Cursor at 0x192eb99b500>
```

In [23]:

```python
df=DataFrame(c.fetchall(),columns=['Brand','Price'])
df
```

Out[23]:

	Brand	Price
0	Audi A4	35000

In [25]:

```python
import pandas as pd
import os
import sqlite3 as lite
from sqlalchemy import create_engine
```

In [26]:

```python
studentId=["rj101","rj102","rj103","rj104"]
SName=["Saurabh","Giftson","Vikas","Radha"]
LName=["Chavan","Paul","Bisoi","Rai"]
Department=["Bms","Bcom","BscCS","BscIT"]
Email=["100@gmail.com","gift@gamil.com","vikas@gmail.com","radha@gmail.com"]
```

In [27]:

```python
studata=zip(studentId,SName,LName,Department,Email)
```

In [28]:

```python
df=pd.DataFrame(data=studata, columns=['StudentId','SName','LName','Department','Email'])
df
```

Out[28]:

	StudentId	SName	LName	Department	Email
0	rj101	Saurabh	Chavan	Bms	100@gmail.com
1	rj102	Giftson	Paul	Bcom	gift@gamil.com
2	rj103	Vikas	Bisoi	BscCS	vikas@gmail.com
3	rj104	Radha	Rai	BscIT	radha@gmail.com

Now Converting this file into CSV , DATA FRAME and SQL.

In [29]:

```python
df.to_csv('Sam example')
df
```

Out[29]:

	StudentId	SName	LName	Department	Email
0	rj101	Saurabh	Chavan	Bms	100@gmail.com
1	rj102	Giftson	Paul	Bcom	gift@gamil.com
2	rj103	Vikas	Bisoi	BscCS	vikas@gmail.com
3	rj104	Radha	Rai	BscIT	radha@gmail.com

In [31]:

```python
#writer=pd.ExcelWriter(data=studata, columns=['StudentId','SName','LName','Department','Ema

writer=pd.ExcelWriter('dataframe.xlsx', engine='xlswriter')
df.to_excel(writer, sheet_name="Sheet1")
writer.save()
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
~\anaconda3\lib\site-packages\pandas\io\excel\_util.py in get_writer(engine_
name)
     48        try:
---> 49            return _writers[engine_name]
     50        except KeyError:

KeyError: 'xlswriter'

During handling of the above exception, another exception occurred:

ValueError                                Traceback (most recent call last)
<ipython-input-31-c35d2599e820> in <module>
      1 #writer=pd.ExcelWriter(data=studata, columns=['StudentId','SName','L
Name','Department','Email'])
      2
----> 3 writer=pd.ExcelWriter('dataframe.xlsx', engine='xlswriter')
      4 df.to_excel(writer, sheet_name="Sheet1")
      5 writer.save()

~\anaconda3\lib\site-packages\pandas\io\excel\_base.py in __new__(cls, path,
engine, **kwargs)
    634                    except KeyError:
    635                        raise ValueError(f"No engine for filetype: '{ex
t}'")
--> 636            cls = get_writer(engine)
    637
    638        return object.__new__(cls)

~\anaconda3\lib\site-packages\pandas\io\excel\_util.py in get_writer(engine_
name)
     49            return _writers[engine_name]
     50        except KeyError:
---> 51            raise ValueError(f"No Excel writer '{engine_name}'")
     52
     53

ValueError: No Excel writer 'xlswriter'
```

In [ ]: