In [1]:
```
my_dict = { 'name' : ["a","b","c","d","e","f","g"],'age' :[20,27,35,55,18,21,35],'designation': ["VP","CEO","CFO","VP","VP","CEO","MD"]}

import pandas as pd
import numpy as np
df=pd.DataFrame(my_dict)
df
```

Out[1]:

	name	age	designation
0	a	20	VP
1	b	27	CEO
2	c	35	CFO
3	d	55	VP
4	e	18	VP
5	f	21	CEO
6	g	35	MD

In [2]:
```
df.to_csv('csv_fds')
df
```

Out[2]:

	name	age	designation
0	a	20	VP
1	b	27	CEO
2	c	35	CFO
3	d	55	VP
4	e	18	VP
5	f	21	CEO
6	g	35	MD

In [3]:
```
df.to_csv('csv_fds',index=False)
df_csv=pd.read_csv('csv_fds')
df_csv
```

Out[3]:

	name	age	designation
0	a	20	VP
1	b	27	CEO
2	c	35	CFO
3	d	55	VP
4	e	18	VP
5	f	21	CEO
6	g	35	MD

In [4]:
```
import pandas as pd
Location = "D:\Fds DataSet\student-mat.csv"
df = pd.read_csv(Location, header=None)
df.head()
```

Out[4]:

	0	1	2	3	4	5	6	7	8	9	...	23	24	25	26	27	28	29	30	31	32
0	school	sex	age	address	famsize	Pstatus	Medu	Fedu	Mjob	Fjob	...	famrel	freetime	goout	Dalc	Walc	health	absences	G1	G2	G3
1	GP	F	18	U	GT3	A	4	4	at_home	teacher	...	4	3	4	1	1	3	6	5	6	6
2	GP	F	17	U	GT3	T	1	1	at_home	other	...	5	3	3	1	1	3	4	5	5	6
3	GP	F	15	U	LE3	T	1	1	at_home	other	...	4	3	2	2	3	3	10	7	8	10
4	GP	F	15	U	GT3	T	4	2	health	services	...	3	2	2	1	1	5	2	15	14	15

5 rows × 33 columns

In [5]:
```
import pandas as pd
Location = "D:\Fds DataSet\student-mat.csv"
df = pd.read_csv(Location, header=None)
df.head()
```

Out[5]:

	0	1	2	3	4	5	6	7	8	9	...	23	24	25	26	27	28	29	30	31	32
0	school	sex	age	address	famsize	Pstatus	Medu	Fedu	Mjob	Fjob	...	famrel	freetime	goout	Dalc	Walc	health	absences	G1	G2	G3
1	GP	F	18	U	GT3	A	4	4	at_home	teacher	...	4	3	4	1	1	3	6	5	6	6
2	GP	F	17	U	GT3	T	1	1	at_home	other	...	5	3	3	1	1	3	4	5	5	6
3	GP	F	15	U	LE3	T	1	1	at_home	other	...	4	3	2	2	3	3	10	7	8	10
4	GP	F	15	U	GT3	T	4	2	health	services	...	3	2	2	1	1	5	2	15	14	15

5 rows × 33 columns

In [6]:
```
import pandas as pd
names = ['Bunny','Rohan','Mary','Raj','Sam']
grades = [78,74,75,88,90]
bsdegrees = [1,0,1,1,0]
msdegrees = [2,1,2,1,1]
phddegrees = [0,1,0,1,0]
Degrees = zip(names,grades,bsdegrees,msdegrees,phddegrees)
columns = ['Names','Grades','BS','MS','PhD']
df = pd.DataFrame(data = Degrees, columns=columns)
df
```

Out[6]:

	Names	Grades	BS	MS	PhD
0	Bunny	78	1	2	0
1	Rohan	74	0	1	1
2	Mary	75	1	2	0
3	Raj	88	1	1	1
4	Sam	90	0	1	0

In [7]:
```
import pandas as pd
Location = "D:\Fds DataSet\gradedata.xlsx"
df = pd.read_excel(Location)
df.columns = ['first','last','sex','age','exer','hrs','grd','addr']
df.head()
```

Out[7]:

	first	last	sex	age	exer	hrs	grd	addr
0	Marcia	Pugh	female	17	3	10	82.4	7379 Highland Rd. , Dublin, GA 31021
1	Kadeem	Morrison	male	18	4	4	78.2	8 Bayport St. , Honolulu, HI 96815
2	Nash	Powell	male	18	5	9	79.3	Encino, CA 91316, 3 Lilac Street
3	Noelani	Wagner	female	14	2	7	83.2	Riverview, FL 33569, 9998 North Smith Dr.
4	Noelani	Cherry	female	18	4	15	87.4	97 SE. Ocean Street , Bethlehem, PA 18015

In [11]:
```
import pandas as pd
names = ['Bunny','Rohan','Mary','Raj','Sam']
grades = [78,74,75,88,90]
Gradelist = zip(names,grades)
df = pd.DataFrame(data = Gradelist,columns=['Names','Grades'])
writer = pd.ExcelWriter('dataframe_FDS.xlsx', engine='xlsxwriter')
df.to_excel(writer, sheet_name='sheet1')
writer.save()
```

In [12]:
```
import sqlite3

con = sqlite3.connect("D:\Fds DataSet\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', 'scutulatus', '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')
('ED', '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')
```

In [13]:
```
import sqlite3

con = sqlite3.connect("D:\Fds DataSet\portal_mammals.sqlite")

cur = con.cursor()

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

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

con.close()
```

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

Saving data to SQL

In [32]:
```
from pandas import DataFrame
cars={'Brand':['Honda','Range Rover','Fortuner','Audi Q7'],'Price':[88000,50000,20000,10000]}

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

```
         Brand  Price
0        Honda  88000
1  Range Rover  50000
2     Fortuner  20000
3      Audi Q7  10000
```

In [23]:
```
import sqlite3
```

In [24]:
```
conn=sqlite3.connect('TestDB1_FDS.db')
c=conn.cursor()
```

In [26]:
```
c.execute('CREATE TABLE CARS1_FDS(Brands text,Price number)')
conn.commit()
```

In [27]:
```
df.to_sql('CARS',conn,if_exists='replace',index=False)
```

In [35]:
```
c.execute('''SELECT Brands,max(price) from CARS''')
df=DataFrame(c.fetchall(),columns=['Brands','Price'])
df
```

Out[35]:

	Brands	Price
0	Honda	88000

In [ ]:
```

```