SETTING UP CONNECTION

In [1]:
```
import mysql.connector as connection
import pandas as pd
mydb = connection.connect(host="localhost",user="root", passwd="mysql",database="uma
curr=mydb.cursor() # SETTING CURSOR
```

SELECT QUERY

In [2]:
```
query = "SELECT * FROM carbon"
pd.read_sql(query , mydb)
```

Out[2]:

	a	b	c	d	e	f	g	h
0	2	1	0,679005	0,701318	0,017033	0,721039	0,730232	0,017014
1	2	1	0,717298	0,642129	0,231319	0,738414	0,65675	0,232369
2	2	1	0,489336	0,303751	0,088462	0,477676	0,263221	0,088712
3	2	1	0,413957	0,632996	0,040843	0,408823	0,657897	0,039796
4	2	1	0,334292	0,543401	0,15989	0,303349	0,558807	0,157373
...	...	...	...	...	...	...	...	...
10716	12	6	0,834201	0,399891	0,89127	0,841858	0,405882	0,891356
10717	12	6	0,698374	0,24471	0,962699	0,706555	0,248416	0,962833
10718	12	6	0,923823	0,568913	0,819842	0,929403	0,576284	0,819879
10719	12	6	0,934978	0,602319	0,938889	0,941844	0,610608	0,938755
10720	12	6	0,953664	0,698374	0,962699	0,961243	0,707812	0,962605

10721 rows × 8 columns

In [3]:
```
query = "SELECT DISTINCT c FROM carbon"
pd.read_sql(query , mydb)
```

Out[3]:

	c
0	0,679005
1	0,717298
2	0,489336
3	0,413957
4	0,334292
...	...
4825	0,89448
4826	0,876454
4827	0,757164

	c
4828	0,9437
4829	0,934978

4830 rows × 1 columns

In [4]:
```
query = "SELECT  a FROM carbon where a=2"
pd.read_sql(query , mydb)
```

Out[4]:

	a
0	2
1	2
2	2
3	2
4	2
5	2
6	2
7	2
8	2
9	2
10	2
11	2
12	2
13	2
14	2
15	2
16	2
17	2
18	2
19	2
20	2
21	2
22	2
23	2
24	2
25	2
26	2
27	2

OPERATORS

In [8]:
```
query = "select a,b from carbon where NOT a=2"
pd.read_sql(query , mydb)
```

Out[8]:

	a	b
0	3	1
1	3	1
2	3	1
3	3	1
4	3	1
...	...	...
10688	12	6
10689	12	6
10690	12	6
10691	12	6
10692	12	6

10693 rows × 2 columns

ORDER BY

In [20]:
```
query = "select DISTINCT a,b ,c from carbon ORDER BY b DESC" #SORTING DONE USING B C
pd.read_sql(query , mydb)
```

Out[20]:

	a	b	c
0	7	6	0,081445
1	7	6	0,081508
2	7	6	0,081639
3	7	6	0,081827
4	7	6	0,082088
...	...	...	...
4839	10	1	0,908712
4840	10	1	0,909647
4841	10	1	0,910313
4842	10	1	0,910339
4843	10	1	0,910659

4844 rows × 3 columns

In [21]:
```
query = "select DISTINCT a,b ,c from carbon ORDER BY b" #SORTING DONE USING B COLUMN
pd.read_sql(query , mydb)
```

Out[21]:

	a	b	c
0	2	1	0,282702
1	2	1	0,287448
2	2	1	0,320995
3	2	1	0,334292
4	2	1	0,394742
...	...	...	...
4839	12	6	0,949602
4840	12	6	0,94994
4841	12	6	0,953495
4842	12	6	0,953664
4843	12	6	0,954851

4844 rows × 3 columns

LIMIT

In [22]:
```
query = "select DISTINCT a,b ,c from carbon ORDER BY b LIMIT 5" #WILL SHOW STARTING
pd.read_sql(query , mydb)
```

Out[22]:

	a	b	c
0	2	1	0,282702
1	2	1	0,287448
2	2	1	0,320995
3	2	1	0,334292
4	2	1	0,394742

MAX , MIN

In [24]:
```
query = "select MAX(a) , MIN(a) from carbon"
pd.read_sql(query , mydb)
```

Out[24]:

	MAX(a)	MIN(a)
0	12	2

COUNT

In [26]:

```
query = "select COUNT(a) as No_Of_Rows from carbon"
pd.read_sql(query , mydb)
```

Out[26]:

	No_Of_Rows
0	10721

AVG

In [27]:

```
query = "select AVG(a) AS AVERAGE from carbon"
pd.read_sql(query , mydb)
```

Out[27]:

	AVERAGE
0	8.2257

SUM

In [28]:

```
query = "select SUM(a) AS SUM from carbon"
pd.read_sql(query , mydb)
```

Out[28]:

	SUM
0	88188.0

NOT IN

In [31]:

```
query = "select  DISTINCT a from carbon where a NOT IN (2,3,4) "
pd.read_sql(query , mydb)
```

Out[31]:

	a
0	5
1	6
2	7
3	8
4	9
5	10
6	11
7	12

BETWEEN

In [33]:

```
query = "select DISTINCT(a) from carbon WHERE A BETWEEN 2 AND 10"
pd.read_sql(query , mydb)
```

Out[33]:

	a
0	2
1	3
2	4
3	5
4	6
5	7
6	8
7	9
8	10

GROUP BY

In [35]:

```
query = "select a,b,count(*) AS Count from carbon GROUP BY b"
pd.read_sql(query , mydb)
```

Out[35]:

	a	b	Count
0	2	1	1787
1	3	2	2419
2	4	3	1539
3	5	4	1932
4	6	5	1456
5	7	6	1588

CREATE TABLE

In [39]:

```
# import mysql.connector as connection
# try:
#     mydb =  connection.connect(host="localhost" , user="root" , passwd="mysql" , d
#     mycur = mydb.cursor() #set the cursor
#     query = "CREATE TABLE TEST(ID INT(10) AUTO_INCREMENT NOT NULL , NAME VARCHAR(3
#     mycur.execute(query)
#     res = mycur.fetchall()
#     print(res)
# except Exception as e:
#     mydb.close()
#     print(str(e))
```

INSERT

In [37]:

```
query = "INSERT INTO carbon(a,b) VALUES(1,2)"
```

```
curr.execute(query)
```

DROP

In [38]:

```
# drop table carbon      IT WILL DELETE THE TABLE carbon so use this command cautiou
# drop table umang      IT WILL DELETE THE database umang so use this command cautio
```

ALTER

In [49]:

```
# ADD COLUMN IN EXISTING TABLE
query = "ALTER TABLE carbon add email varchar(30)"
curr.execute(query)
query = "SELECT * FROM carbon"
pd.read_sql(query , mydb)
```

Out[49]:

	a	b	c	d	e	f	g	h	email
0	2	1	0,679005	0,701318	0,017033	0,721039	0,730232	0,017014	None
1	2	1	0,717298	0,642129	0,231319	0,738414	0,65675	0,232369	None
2	2	1	0,489336	0,303751	0,088462	0,477676	0,263221	0,088712	None
3	2	1	0,413957	0,632996	0,040843	0,408823	0,657897	0,039796	None
4	2	1	0,334292	0,543401	0,15989	0,303349	0,558807	0,157373	None
...	...	...	...	...	...	...	...	...	...
10718	12	6	0,923823	0,568913	0,819842	0,929403	0,576284	0,819879	None
10719	12	6	0,934978	0,602319	0,938889	0,941844	0,610608	0,938755	None
10720	12	6	0,953664	0,698374	0,962699	0,961243	0,707812	0,962605	None
10721	1	2	None	None	None	None	None	None	None
10722	1	2	None	None	None	None	None	None	None

10723 rows × 9 columns

In [52]:

```
# DROP COLUMN IN EXISTING TABLE
query = "ALTER TABLE carbon DROP column email"
curr.execute(query)
query = "SELECT * FROM carbon"
pd.read_sql(query , mydb)
```

Out[52]:

	a	b	c	d	e	f	g	h
0	2	1	0,679005	0,701318	0,017033	0,721039	0,730232	0,017014
1	2	1	0,717298	0,642129	0,231319	0,738414	0,65675	0,232369
2	2	1	0,489336	0,303751	0,088462	0,477676	0,263221	0,088712
3	2	1	0,413957	0,632996	0,040843	0,408823	0,657897	0,039796
4	2	1	0,334292	0,543401	0,15989	0,303349	0,558807	0,157373
...	...	...	...	...	...	...	...	...

	a	b	c	d	e	f	g	h
10718	12	6	0,923823	0,568913	0,819842	0,929403	0,576284	0,819879
10719	12	6	0,934978	0,602319	0,938889	0,941844	0,610608	0,938755
10720	12	6	0,953664	0,698374	0,962699	0,961243	0,707812	0,962605
10721	1	2	None	None	None	None	None	None
10722	1	2	None	None	None	None	None	None

10723 rows × 8 columns

CONSTRAINTS

In [55]:
```
# ADD COLUMN IN EXISTING TABLE WITH NOT NULL CONSTRAINT
query = "ALTER TABLE carbon add email varchar(30) NOT NULL"
curr.execute(query)
query = "SELECT * FROM carbon"
pd.read_sql(query , mydb)
```

Out[55]:

	a	b	c	d	e	f	g	h	email
0	2	1	0,679005	0,701318	0,017033	0,721039	0,730232	0,017014	
1	2	1	0,717298	0,642129	0,231319	0,738414	0,65675	0,232369	
2	2	1	0,489336	0,303751	0,088462	0,477676	0,263221	0,088712	
3	2	1	0,413957	0,632996	0,040843	0,408823	0,657897	0,039796	
4	2	1	0,334292	0,543401	0,15989	0,303349	0,558807	0,157373	
...	...	...	...	...	...	...	...	...	...
10718	12	6	0,923823	0,568913	0,819842	0,929403	0,576284	0,819879	
10719	12	6	0,934978	0,602319	0,938889	0,941844	0,610608	0,938755	
10720	12	6	0,953664	0,698374	0,962699	0,961243	0,707812	0,962605	
10721	1	2	None	None	None	None	None	None	
10722	1	2	None	None	None	None	None	None	

10723 rows × 9 columns

VIEWS

In [56]:
```
# ADD COLUMN IN EXISTING TABLE
query = "CREATE VIEW CARBON_VIEW AS SELECT A,B FROM CARBON"
curr.execute(query)
query = "SELECT * FROM CARBON_VIEW"
pd.read_sql(query , mydb)
```

Out[56]:

	A	B
0	2	1

	A	B
1	2	1
2	2	1
3	2	1
4	2	1
...	...	...
10718	12	6
10719	12	6
10720	12	6
10721	1	2
10722	1	2

10723 rows × 2 columns

DROP VIEWS

In [58]:
```
# query = "DROP VIEW CARBON_VIEW"
# curr.execute(query)
# query = "SELECT * FROM CARBON_VIEW" THIS WILL SHOW ERROR AS WE HAVE DROPPED OUR VI
# pd.read_sql(query , mydb)
```