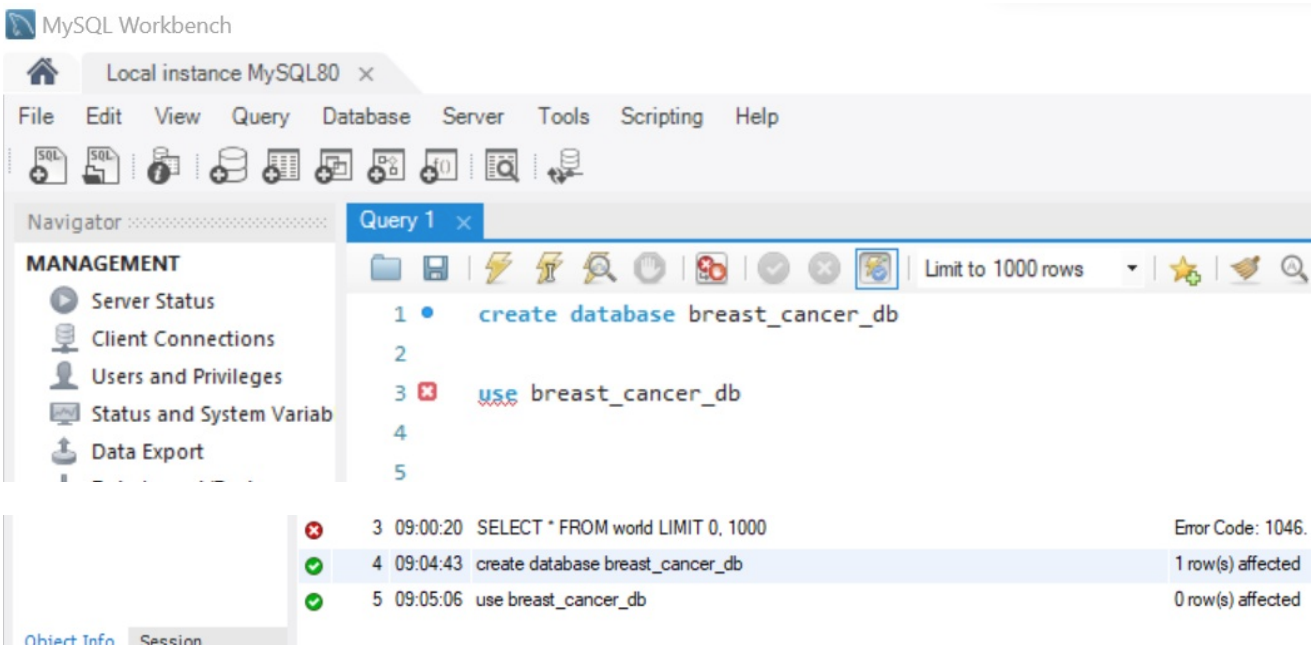
Working with SQL

Python Connector

In [1]:
```
!pip install pymysql
```

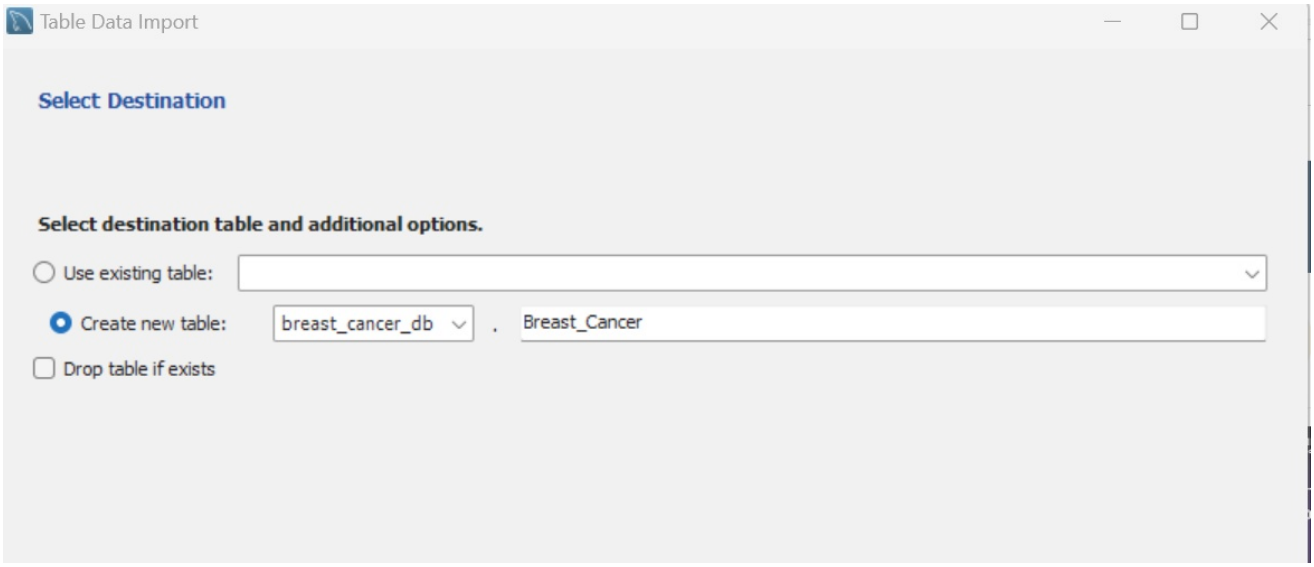
```
Collecting pymysql
  Obtaining dependency information for pymysql from https://files.pythonhosted.org/packages/e5/30/20467e39523d0
cfc2b6227902d3687a16364307260c75e6a1cb4422b0c62/PyMySQL-1.1.0-py3-none-any.whl.metadata
  Downloading PyMySQL-1.1.0-py3-none-any.whl.metadata (4.4 kB)
Downloading PyMySQL-1.1.0-py3-none-any.whl (44 kB)
   ---------------------------------------- 0.0/44.8 kB ? eta -:--:--
   ---------------- ---------------------- 20.5/44.8 kB 640.0 kB/s eta 0:00:01
   ---------------------------------------- 44.8/44.8 kB 734.6 kB/s eta 0:00:00
Installing collected packages: pymysql
Successfully installed pymysql-1.1.0
```

Create database in MYSQL if we have not already, which we will connect with python

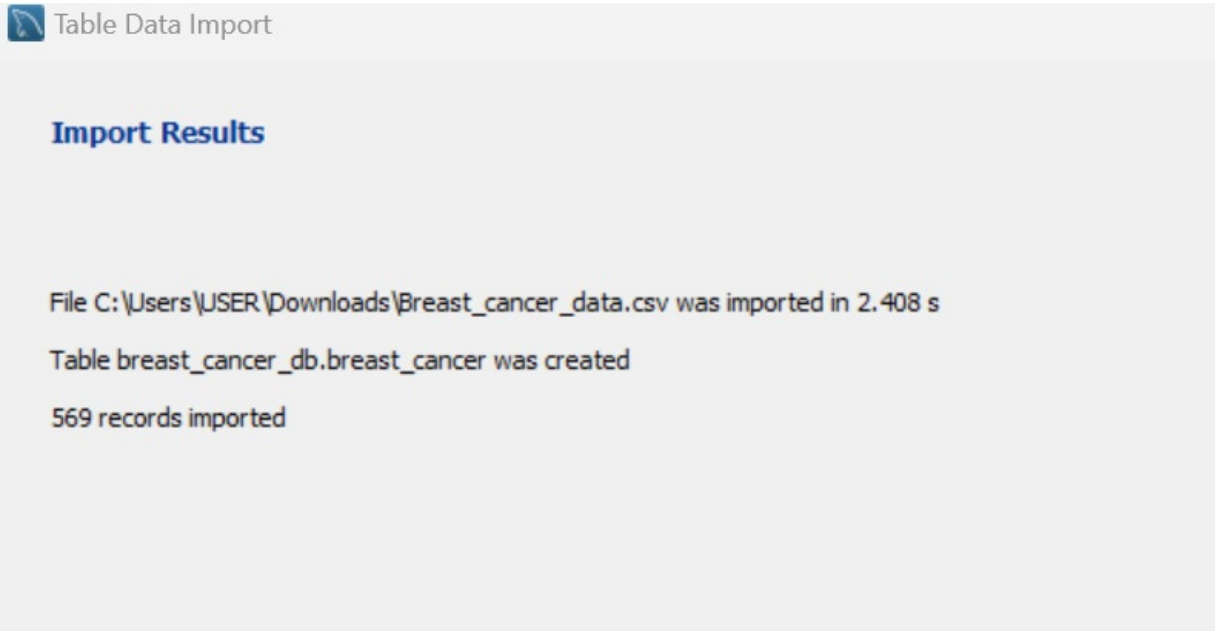


Importing csv file in mysql from local using Table data import wizard

We can put table name on our own, I kept Breast_Cancer



Click next with default until data does not get imported



lets check:

```
5    select * from Breast_Cancer;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

mean_radius	mean_texture	mean_perimeter	mean_area	mean_smoothness	diagnosis
17.99	10.38	122.8	1001	0.1184	0
20.57	17.77	132.9	1326	0.08474	0
19.69	21.25	130	1203	0.1096	0
11.42	20.38	77.58	386.1	0.1425	0
20.29	14.34	135.1	1297	0.1003	0

Breast Cancer 2 | Result Grid | Read Only

NOW lets look, how we can connect it with Python for future EDA analysis

In [2]:
```
import pymysql
```

In [3]:
```
#Here connecting jupyter notebook/python with mysql database
db = pymysql.connect(host="localhost",user= "root",password= "",database= "breast_cancer_db")
```

In [4]:
```
db
```

Out[4]:
```
<pymysql.connections.Connection at 0x1caf23def50>
```

Read SQL query in pandas dataframe

In [6]:
```
import pandas as pd
```

In [7]:
```
df=pd.read_sql_query("""select * from Breast_Cancer""", db, parse_dates= True)
```

```
C:\Users\USER\AppData\Local\Temp\ipykernel_15348\189591120.py:1: UserWarning: pandas only supports SQLAlchemy connectable (engine/connection) or database string URI or sqlite3 DBAPI2 connection. Other DBAPI2 objects are not tested. Please consider using SQLAlchemy.
  df=pd.read_sql_query("""select * from Breast_Cancer""", db, parse_dates= True)
```

In [8]:
```
df.head()
```

Out[8]:

	mean_radius	mean_texture	mean_perimeter	mean_area	mean_smoothness	diagnosis
0	17.99	10.38	122.80	1001.0	0.11840	0
1	20.57	17.77	132.90	1326.0	0.08474	0
2	19.69	21.25	130.00	1203.0	0.10960	0
3	11.42	20.38	77.58	386.1	0.14250	0
4	20.29	14.34	135.10	1297.0	0.10030	0

In [9]:
```
#Now in this way we can work with SQL and Pandas
```

Working with JSON

Importing pandas library and reading json file, which is downloaded in download folder

In [10]:
```
df=pd.read_json(r"C:\Users\USER\Downloads\train.json")
```

In [11]:
```
df.head(6)
```

Out[11]:

	id	cuisine	ingredients
0	10259	greek	[romaine lettuce, black olives, grape tomatoes...
1	25693	southern_us	[plain flour, ground pepper, salt, tomatoes, g...
2	20130	filipino	[eggs, pepper, salt, mayonaise, cooking oil, g...
3	22213	indian	[water, vegetable oil, wheat, salt]
4	13162	indian	[black pepper, shallots, cornflour, cayenne pe...
5	6602	jamaican	[plain flour, sugar, butter, eggs, fresh ginge...