THIRD PARTY LOGISTICS DATABASE

Milestone: Application

Group 05

Deepak Kumar Meena

Saravanan Arumugam

857 415 1106

646 251 2318

meena.d@northeastern.edu

arumugam.sa@northeastern.edu

Percentage of effort contributed by Student 1: 50

Percentage of effort contributed by Student 2: 50

Signature of Student 1: Deepak Kumar Meena

Signature of Student 2: Saravanan Arumugam

Submission Date: November 26, 2022

In [17]:
```
#
import mysql.connector
#
from mysql.connector import Error
#
try:
    connection = mysql.connector.connect(host='127.0.0.1',
                                         database='3pl_tms',
                                         user='root',
                                         password='123456789',
                                         auth_plugin = 'mysql_native_password')
    if connection.is_connected():
        db_Info = connection.get_server_info()
        print("Connected to MySQL Server version ", db_Info)
        cursor = connection.cursor()
        cursor.execute("select database();")
        record = cursor.fetchone()
        print("Your connected to database: ", record)
#
except Error as e:
    print("Error while connecting to MySQL", e)



#you should see the following output
#'''Connected to MySQL Server version  8.0.17
#Your connected to database:  ('classicmodels',)
#True
#MySQL connection is closed'''
#
```

```
Connected to MySQL Server version  8.0.31
Your connected to database:  ('3pl_tms',)
```

In [18]:
```
import pandas as pd
```

In [19]:
```
df = pd.read_sql_query("SELECT * FROM  customer", connection)
df
```

Out[19]:

	customer_id	customer_name	address	poc
0	1	Macejkovic, Goodwin and Mayer	2947 Rice Path\nDickinsonfort, AZ 75231	Damaris Waters
1	100	Parisian PLC	986 Maida Flats\nWest Camrynport, NJ 47897	Vernon Keeling I
2	103	Pfannerstill-Hermann	005 Emmalee Dale Suite 681\nSouth Cloyd, CO 81...	Beatrice Altenwerth
3	114	Bartell-Wisoky	89433 Cormier Overpass\nSouth Lavada, VT 40757...	Mrs. Juliana Kirlin
4	120	Graham PLC	9872 Kevon Mountains\nEast Shaynefort, CA 82358	Eva O'Reilly
...	...	...	...	...
94	97	Schuppe, Rath and Heidenreich	404 Mertie Isle\nJerodton, IA 94279-5149	Dr. Uriah Pfannersti
95	970	Medhurst, Farrell and Ebert	95099 Maia Harbors Suite 778\nBeahanville, WV ...	June Tromp
96	980	Stokes, Leuschke and Gerhold	4865 Langworth Walks Apt. 269\nPalmamouth, MS ...	Parker Bednar
97	985	Simonis-Armstrong	60120 Kovacek Extension\nLake Chazport, IL 29252	Prof. Carlotta VonRu
98	99	Kozey Ltd	13449 Kendrick Underpass\nFayeside, LA 18655	Carlos Powlowski

99 rows × 4 columns

In [25]:
```
df2 = pd.read_sql_query("SELECT vendor.vendor_id, count(vehicle.vehicle_id) as Number_of_Vehicles, SUM(vehicle.capacity) as Total_Capacity FROM vendor INNER JOIN Vehicle ON vendor.v
df2.head()
```

```
C:\ProgramData\Anaconda3\lib\site-packages\pandas\io\sql.py:761: UserWarning: pandas only support SQLAlchemy connectable(engine/connection) ordatabase string URI or sqlite3 DBAPI2
connectionother DBAPI2 objects are not tested, please consider using SQLAlchemy
  warnings.warn(
```

Out[25]:

	vendor_id	Number_of_Vehicles	Total_Capacity
0	310	1	15.0
1	410	1	10.0
2	200	1	13.0
3	500	1	12.0
4	539	1	5.0

In [32]:
```
contracts_per_customer = pd.read_sql_query("SELECT customer_id, COUNT(*) as contracts FROM contract GROUP BY customer_id", connection)
contracts_per_customer
```

```
C:\ProgramData\Anaconda3\lib\site-packages\pandas\io\sql.py:761: UserWarning: pandas only support SQLAlchemy connectable(engine/connection) ordatabase string URI or sqlite3 DBAPI2 connectionother DBAPI2 objects are not tested, please consider using SQLAlchemy
  warnings.warn(
```

Out[32]:

	customer_id	contracts
0	100	3
1	103	3
2	114	3
3	120	3
4	136	3
...	...	...
93	97	2
94	970	2
95	980	2
96	985	2
97	99	2

98 rows × 2 columns

In [33]:
```
import matplotlib.pyplot as plt
```

In [56]:
```
df5 = pd.read_sql_query("SELECT capacity FROM vehicle", connection)
df5
```

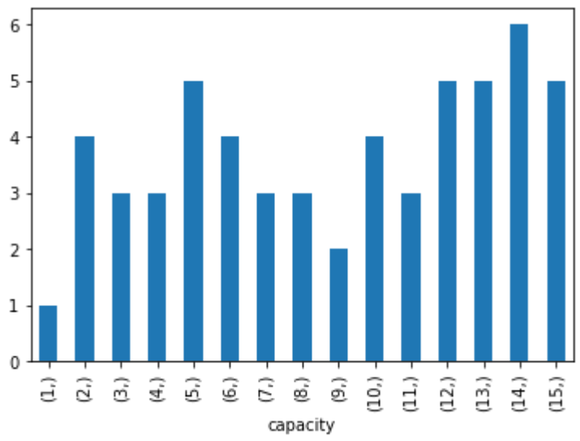
```
C:\ProgramData\Anaconda3\lib\site-packages\pandas\io\sql.py:761: UserWarning: pandas only support SQLAlchemy connectable(engine/connection) ordatabase string URI or sqlite3 DBAPI2 connectionother DBAPI2 objects are not tested, please consider using SQLAlchemy
  warnings.warn(
```

Out[56]:

	capacity
0	15
1	10
2	13
3	12
4	5
5	11
6	14
7	4
8	14
9	6
10	5
11	8
12	2
13	14
14	11
15	10
16	3
17	12
18	10
19	7
20	15
21	10
22	2
23	5
24	1
25	12
26	8
27	13
28	15
29	13
30	6
31	4
32	14
33	12

	capacity
34	7
35	15
36	3
37	2
38	5
39	6
40	14
41	4
42	2
43	6
44	5
45	12
46	7
47	9
48	14
49	13
50	11
51	13
52	3
53	9
54	8
55	15

In [52]:
```
## count of vehicles per capacity
df5.value_counts(sort = False).plot.bar()
plt.show()
```



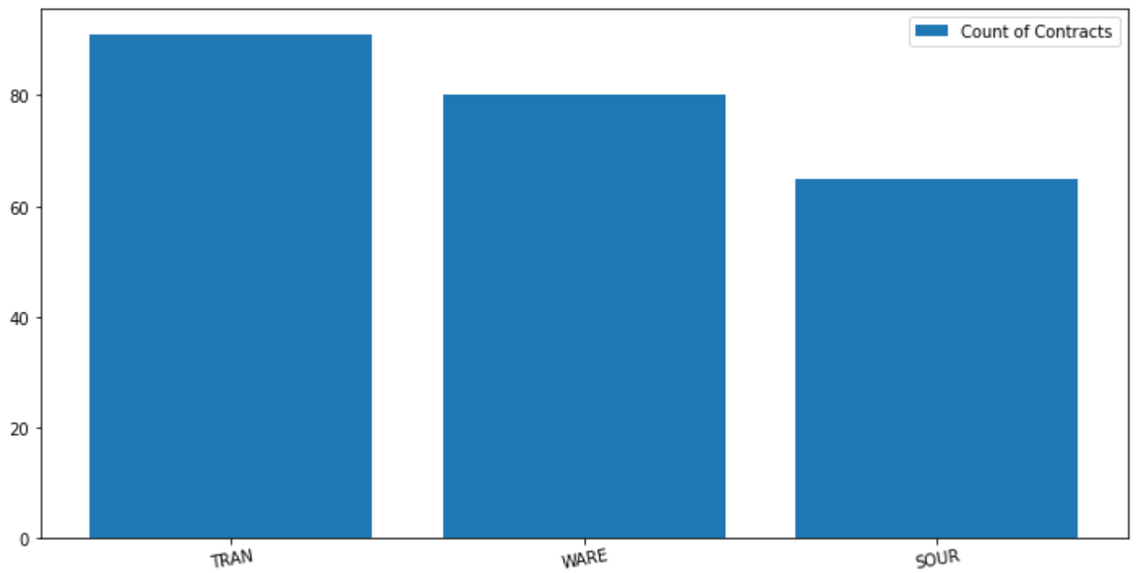
In [59]:
```
df = pd.read_sql_query("SELECT line_of_business, count(*) as count FROM contract GROUP BY line_of_business", connection)
df
```

```
C:\ProgramData\Anaconda3\lib\site-packages\pandas\io\sql.py:761: UserWarning: pandas only support SQLAlchemy connectable(engine/connection) ordatabase string URI or sqlite3 DBAPI2 connectionother DBAPI2 objects are not tested, please consider using SQLAlchemy
  warnings.warn(
```

Out[59]:

	line_of_business	count
0	TRAN	91
1	WARE	80
2	SOUR	65

In [60]:
```
fig, ax = plt.subplots(figsize = (12, 6))
ax.bar(df['line_of_business'], df['count'], label = 'Count of Contracts')
ax.legend()
plt.xticks(rotation = 10, wrap = True)
plt.show()
```



In [ ]: