

```
In [1]: import os
import pickle
import pandas as pd
import numpy as np
from pandas import DataFrame, Series
```

```
In [2]: xyzcust10=pd.read_csv('xyzcust10.csv')
```

```
In [3]: (xyzcust10).dtypes
```

```
Out[3]: ACCTNO                object
ZIP                int64
ZIP4               int64
LTD_SALES          float64
LTD_TRANSACTIONS   int64
YTD_SALES_2009     float64
YTD_TRANSACTIONS_2009 int64
CHANNEL_ACQUISITION object
BUYER_STATUS       object
ZIP9_Supercode     int64
ZIP9_SUPERCODE     int64
dtype: object
```

```
In [4]: type(xyzcust10)
```

```
Out[4]: pandas.core.frame.DataFrame
```

```
In [5]: pickle.dump(xyzcust10,open('xyzcust10.p','wb'))
```

```
In [6]: xyzcust10=pickle.load(open('xyzcust10.p','rb'))
xyzcust10red = xyzcust10.copy()
xyzcust10rev1 = xyzcust10.copy()
```

```
In [7]: type(xyzcust10)
```

```
Out[7]: pandas.core.frame.DataFrame
```

```
In [8]: xyzcust10.head()
```

```
Out[8]:
```

	ACCTNO	ZIP	ZIP4	LTD_SALES	LTD_TRANSACTIONS	YTD_SALES_2009	YT
0	WDQQLLDQL	60084	5016	90.0	1	0.0	0
1	WQWAYHYLA	60091	1750	4227.0	9	1263.0	3
2	GSHAPLHAW	60067	900	420.0	3	129.0	1
3	PGGYDYWAD	60068	3838	6552.0	6	0.0	0
4	LWPSGPLLS	60090	3932	189.0	3	72.0	1

```
In [9]: xyzcust10.columns
```

```
Out[9]: Index([u'ACCTNO', u'ZIP', u'ZIP4', u'LTD_SALES', u'LTD_TRANSACTIONS',  
              u'YTD_SALES_2009', u'YTD_TRANSACTIONS_2009', u'CHANNEL_ACQUISITION',  
              u'BUYER_STATUS', u'ZIP9_Supercode', u'ZIP9_SUPERCODE'],  
             dtype='object')
```

```
In [10]: xyzcust10.dtypes
```

```
Out[10]: ACCTNO          object  
        ZIP             int64  
        ZIP4            int64  
        LTD_SALES       float64  
        LTD_TRANSACTIONS int64  
        YTD_SALES_2009   float64  
        YTD_TRANSACTIONS_2009 int64  
        CHANNEL_ACQUISITION object  
        BUYER_STATUS     object  
        ZIP9_Supercode   int64  
        ZIP9_SUPERCODE   int64  
        dtype: object
```

```
In [11]: (xyzcust10.ZIP9_Supercode!=xyzcust10.ZIP9_SUPERCODE).sum()
```

```
Out[11]: 0
```

```
In [12]: # Testing option 2 Listed  
(~(xyzcust10.ZIP9_Supercode==xyzcust10.ZIP9_SUPERCODE))
```

```
Out[12]: 0      False
          1      False
          2      False
          3      False
          4      False
          5      False
          6      False
          7      False
          8      False
          9      False
         10      False
         11      False
         12      False
         13      False
         14      False
         15      False
         16      False
         17      False
         18      False
         19      False
         20      False
         21      False
         22      False
         23      False
         24      False
         25      False
         26      False
         27      False
         28      False
         29      False
          ...
        30441    False
        30442    False
        30443    False
        30444    False
        30445    False
        30446    False
        30447    False
        30448    False
        30449    False
        30450    False
        30451    False
        30452    False
        30453    False
        30454    False
        30455    False
        30456    False
        30457    False
        30458    False
        30459    False
        30460    False
        30461    False
        30462    False
        30463    False
        30464    False
        30465    False
        30466    False
```

```
30467    False
30468    False
30469    False
30470    False
Length: 30471, dtype: bool
```

```
In [13]: # Testing option 3 listed; looks like it equals a negative number which means  
# they're equal, since the first option being zero/false means they're equal.  
~(xyzcust10.ZIP9_Supercode==xyzcust10.ZIP9_SUPERCODE).sum()
```

```
Out[13]: -30472
```

```
In [14]: xyzcust10['ZIP9_Supercode']
```

```
Out[14]: 0      600845016
          1      600911750
          2      600670900
          3      600683838
          4      600903932
          5      600858670
          6      600913447
          7      600911613
          8      600683668
          9      600911759
         10      600818325
         11      600562960
         12      600912813
         13      600673528
         14      600603209
         15      600891326
         16      600692129
         17      600911453
         18      600682219
         19      600624628
         20      600912346
         21      600614527
         22      600612123
         23      600894622
         24      600626077
         25      600818248
         26      600932706
         27      600623210
         28      600933840
         29      600905705
          ...
        30441    600987410
        30442    600987615
        30443    600988020
        30444    600988426
        30445    600988550
        30446    600987893
        30447    600987977
        30448    600987805
        30449    600988014
        30450    600988671
        30451    600988128
        30452    600988760
        30453    600988093
        30454    600987108
        30455    600987552
        30456         60098
        30457    600989172
        30458    600988958
        30459    600989029
        30460    600987869
        30461    600982556
        30462    600980142
        30463    600982857
        30464    600983342
        30465    600987858
        30466    600983951
```

```
30467    600989681
30468    600983858
30469    600987927
30470    600984160
```

Name: ZIP9_Supercode, Length: 30471, dtype: int64

```
In [15]: del xyzcust10['ZIP9_Supercode']
        del xyzcust10rev1['ZIP9_Supercode']
```

```
In [16]: xyzcust10red.drop('ZIP9_Supercode',axis=1,inplace=True)
```

```
In [17]: os.getcwd()
```

```
Out[17]: 'c:\\users\\crmo\\desktop\\class\\predict 420\\exercises\\exercise 3'
```

```
In [18]: import sqlalchemy
```

```
In [19]: from sqlalchemy import create_engine
```

```
In [20]: engine=create_engine('sqlite:///xyz.db')
```

```
In [21]: xyztrans = pd.read_sql('xyztrans', engine)
```

```
In [22]: xyztrans.dtypes
```

```
Out[22]: index                int64
         ACCTNO                object
         QTY                  int64
         TRANDATE              object
         TRAN_CHANNEL          object
         PRICE                 float64
         TOTAMT                float64
         ORDERNO               object
         DEPTDESCR             object
         dtype: object
```

```
In [23]: xyztrans.columns
```

```
Out[23]: Index([u'index', u'ACCTNO', u'QTY', u'TRANDATE', u'TRAN_CHANNEL', u'PRICE',
                u'TOTAMT', u'ORDERNO', u'DEPTDESCR'],
                dtype='object')
```

```
In [24]: from sqlalchemy import schema
```

```
In [25]: xyzMetaData = schema.MetaData(bind=engine)
        xyzMetaData.reflect()
```



```
In [26]: xyzMetaData.tables
```

```
Out[26]: ImmutableDict({'xyztrans': Table('xyztrans', MetaData(bind=Engine(sqlite:///xyz.db)), Column('index', BIGINT(), table=<xyztrans>), Column('ACCTNO', TEXT(), table=<xyztrans>), Column('QTY', BIGINT(), table=<xyztrans>), Column('TRAN_DATE', TEXT(), table=<xyztrans>), Column('TRAN_CHANNEL', TEXT(), table=<xyztrans>), Column('PRICE', FLOAT(), table=<xyztrans>), Column('TOTAMT', FLOAT(), table=<xyztrans>), Column('ORDERNO', TEXT(), table=<xyztrans>), Column('DEPTD_ESCR', TEXT(), table=<xyztrans>), schema=None)})
```

```
In [28]: xyzMetaData.tables.keys()
```

```
Out[28]: [u'xyztrans']
```

```
In [29]: xyzcust10rev1.duplicated().sum()
```

```
Out[29]: 292
```

```
In [30]: xyzcustUnDup=xyzcust10rev1.drop_duplicates()
xyzcustUnDup.duplicated().sum()
```

```
Out[30]: 0
```

```
In [31]: xyzcust10rev1.duplicated('ACCTNO').sum()
```

```
Out[31]: 292
```

```
In [32]: xyzcust10rev1.ACCTNO.duplicated().sum()
```

```
Out[32]: 292
```

```
In [33]: xyzcustUnDup.to_sql('xyzcust', engine)
```

```
In [34]: pd.read_sql_table('xyzcust', engine).columns
```

```
Out[34]: Index([u'index', u'ACCTNO', u'ZIP', u'ZIP4', u'LTD_SALES', u'LTD_TRANSACTION
S',
               u'YTD_SALES_2009', u'YTD_TRANSACTIONS_2009', u'CHANNEL_ACQUISITION',
               u'BUYER_STATUS', u'ZIP9_SUPERCODE'],
              dtype='object')
```

```
In [35]: xyzMetaData.tables.keys()
```

```
Out[35]: [u'xyztrans']
```

```
In [36]: xyzMetaData
```

```
Out[36]: MetaData(bind=Engine(sqlite:///xyz.db))
```

```
In [37]: from sqlalchemy import inspect
```

```
In [38]: insp=inspect(engine)
```

```
In [39]: insp.get_table_names()
```

```
Out[39]: [u'xyzcust', u'xyztrans']
```

```
In [40]: rttrans=pd.read_sql_query("SELECT * FROM xyztrans WHERE TRAN_CHANNEL='RT'", engine)
```

In [41]: rttrans

Out[41]:

	index	ACCTNO	QTY	TRANDATE	TRAN_CHANNEL	PRICE	TOTAMT	
0	0	WGDQLA	1	09JUN2009	RT	599.85	599.85	CC
1	1	WGDQLA	1	09JUN2009	RT	39.00	39.00	CC
2	2	WGDQLA	1	28NOV2009	RT	15.00	15.00	CC
3	3	WGDQLA	1	28NOV2009	RT	69.00	69.00	CC
4	4	WGDQLA	1	28NOV2009	RT	84.00	84.00	CC
5	5	WGDQLA	1	28NOV2009	RT	69.00	69.00	CC
6	6	WGDQLA	1	28NOV2009	RT	89.85	89.85	CC
7	7	WGDQLA	1	28NOV2009	RT	119.85	119.85	CC
8	8	APSYYW	1	07JUN2009	RT	22.50	22.50	CC
9	9	APSYYW	1	07JUN2009	RT	44.85	44.85	CC
10	10	APSYYW	1	07JUN2009	RT	30.00	30.00	CC
11	11	APSYYW	1	07JUN2009	RT	30.00	30.00	CC
12	13	GGDWGY	1	14SEP2009	RT	239.85	239.85	CC
13	14	GGDWGY	1	18DEC2009	RT	234.00	234.00	CC
14	15	HHSSAL	1	13SEP2009	RT	66.00	66.00	CC
15	16	HHSSAL	1	13SEP2009	RT	66.00	66.00	CC
16	17	HHSSAL	1	13SEP2009	RT	38.25	38.25	CC

	index	ACCTNO	QTY	TRANDATE	TRAN_CHANNEL	PRICE	TOTAMT	
17	18	HHSSAL	1	13SEP2009	RT	28.50	28.50	C(
18	19	HHSSAL	1	13SEP2009	RT	43.50	43.50	C(
19	20	HHSSAL	1	13SEP2009	RT	24.00	24.00	C(
20	21	HHSSAL	1	13SEP2009	RT	42.00	42.00	C(
21	22	HHSSAL	1	13SEP2009	RT	38.85	38.85	C(
22	23	HHSSAL	1	13SEP2009	RT	105.00	105.00	C(
23	24	HHSSAL	1	13SEP2009	RT	30.00	30.00	C(
24	25	HHSSAL	1	13SEP2009	RT	32.85	32.85	C(
25	26	HHSSAL	1	13SEP2009	RT	84.00	84.00	C(
26	27	HHSSAL	1	18DEC2009	RT	28.50	28.50	C(
27	28	HHSSAL	1	18DEC2009	RT	43.50	43.50	C(
28	29	HHSSAL	1	18DEC2009	RT	27.00	27.00	C(
29	30	HHSSAL	1	18DEC2009	RT	31.50	31.50	C(
...
53781	62350	GYLAPPYPQ	1	11OCT2009	RT	59.85	59.85	C(

	index	ACCTNO	QTY	TRANDATE	TRAN_CHANNEL	PRICE	TOTAMT	
53782	62351	GYLAPPYPQ	1	11OCT2009	RT	126.00	126.00	C
53783	62352	GYLAPPYPQ	1	11OCT2009	RT	81.00	81.00	C
53784	62353	GYLAPPYPQ	1	11OCT2009	RT	36.00	36.00	C
53785	62354	GYLAPPYYW	1	10OCT2009	RT	31.50	31.50	C
53786	62355	GYLPADYQL	1	14OCT2009	RT	59.85	59.85	C
53787	62356	GYLPADYQL	1	14OCT2009	RT	36.00	36.00	C
53788	62357	GYLPADYQL	1	14OCT2009	RT	72.00	72.00	C
53789	62358	GYLPADYQL	1	14OCT2009	RT	72.00	72.00	C
53790	62359	GYLPADYQL	1	14OCT2009	RT	27.00	27.00	C
53791	62360	GYLPADYQL	1	14OCT2009	RT	48.00	48.00	C
53792	62361	GYLPADYQL	1	14OCT2009	RT	66.00	66.00	C
53793	62362	GYLPADYQL	1	14OCT2009	RT	57.00	57.00	C
53794	62364	GYLHWWQGW	1	21NOV2009	RT	36.00	36.00	C
53795	62365	GYLHWWQGW	1	21NOV2009	RT	30.00	30.00	C
53796	62366	GYLHWWQGW	1	21NOV2009	RT	28.50	28.50	C
53797	62367	GYLHWWQGW	1	21NOV2009	RT	54.00	54.00	C

	index	ACCTNO	QTY	TRANDATE	TRAN_CHANNEL	PRICE	TOTAMT	
53798	62368	GYLHWWQGW	1	21NOV2009	RT	28.50	28.50	C
53799	62369	GYLYSQQSG	1	27NOV2009	RT	27.00	27.00	C
53800	62370	GYLYSQQSG	1	27NOV2009	RT	45.00	45.00	C
53801	62371	GYLYSQQSG	1	27NOV2009	RT	74.85	74.85	C
53802	62372	GYLYSQQSG	1	21NOV2009	RT	62.64	62.64	C
53803	62373	GYLYSQQSG	1	21NOV2009	RT	299.85	299.85	C
53804	62374	GYLYSQQSG	1	29OCT2009	RT	299.85	299.85	C
53805	62375	GYLYSQQSG	1	14NOV2009	RT	32.85	32.85	C
53806	62376	GYLYSQQSG	1	14NOV2009	RT	45.00	45.00	C
53807	62377	GYLYSQQSG	1	14NOV2009	RT	15.00	15.00	C
53808	62378	GYLYSQQSG	1	29NOV2009	RT	42.00	42.00	C
53809	62379	GYLYSQQSG	1	29NOV2009	RT	74.85	74.85	C
53810	62381	GYGWWHQWW	1	24OCT2009	RT	1199.90	1199.85	C

53811 rows × 9 columns

In [42]: `custtrans=pd.read_sql_query("SELECT * FROM xyzcust", engine)`

In [43]: `custtrans.head()`

Out[43]:

	index	ACCTNO	ZIP	ZIP4	LTD_SALES	LTD_TRANSACTIONS	YTD_SALES_20
0	0	WDQQLLDQL	60084	5016	90.0	1	0.0
1	1	WQWAYHYLA	60091	1750	4227.0	9	1263.0
2	2	GSHAPLHAW	60067	900	420.0	3	129.0
3	3	PGGYDYWAD	60068	3838	6552.0	6	0.0
4	4	LWPSGPLLS	60090	3932	189.0	3	72.0

In [44]: `allrttrans=pd.read_sql_query("SELECT * FROM xyztrans", engine)`

In [45]: `allrttrans.head()`

Out[45]:

	index	ACCTNO	QTY	TRANDATE	TRAN_CHANNEL	PRICE	TOTAMT	ORDER
0	0	WGDQLA	1	09JUN2009	RT	599.85	599.85	CCXXNNXXXX
1	1	WGDQLA	1	09JUN2009	RT	39.00	39.00	CCXXNNXXXX
2	2	WGDQLA	1	28NOV2009	RT	15.00	15.00	CCXNXXKXXX
3	3	WGDQLA	1	28NOV2009	RT	69.00	69.00	CCXNXXKXXX
4	4	WGDQLA	1	28NOV2009	RT	84.00	84.00	CCXNXXKXXX

In [46]: `# Get a list of all records in xyzcust table where YTD_SALES_2009 > 1000`
`custtrans_ytdSales=pd.read_sql_query("SELECT * FROM xyzcust WHERE YTD_SALES_2009 > 1000", engine)`

In [47]: `custtrans_ytdSales`

Out[47]:

	index	ACCTNO	ZIP	ZIP4	LTD_SALES	LTD_TRANSACTIONS	YTD_SALE
0	1	WQWAYHYLA	60091	1750	4227.0	9	1263.0
1	12	WLDAYHQLW	60091	2813	3240.0	7	2064.0
2	24	ASDHAYAW	60062	6077	3411.0	19	1875.0
3	31	HDWAWLH	60069	3402	25476.0	93	1623.0
4	40	GSHLHGHW	60070	2352	3576.0	10	1398.0
5	77	LGDGQPGDH	60061	4540	2364.0	17	1359.0
6	78	GQHYPQYD	60093	2902	12828.0	51	1815.0
7	116	WYDPLSHGP	60091	1707	7671.0	25	1152.0
8	126	WYPYWWPQP	60091	1620	4812.0	23	1116.0
9	139	SGAHSWLHA	60093	3748	14448.0	5	14448.0
10	231	GHYYWDLAL	60093	1004	36495.0	97	5586.0
11	307	WHAHHQAAP	60056	2948	4860.0	6	2349.0
12	313	GGDALSQLG	60091	2553	3300.0	1	3300.0
13	326	LPSLDDGYA	60062	5154	3435.0	16	1410.0
14	364	GHPGDAWDD	60098	2424	1272.0	6	1272.0
15	388	PWLYYQADS	60069	3211	3201.0	5	1029.0
16	397	WDDASHSAA	60062	6028	2148.0	9	1026.0
17	461	SLYLSYH	60084	9767	6978.0	17	1152.0
18	479	WGHGGADH	60067	6775	8943.0	40	1845.0
19	487	PGLQALDPY	60067	4242	7665.0	20	3702.0
20	493	PLDDDQHL	60076	2132	1170.0	8	1170.0
21	545	ALQSDWDWD	60091	3024	1362.0	3	1245.0
22	563	GGHAHHYDW	60091	1524	4341.0	17	1083.0
23	564	GGAWQLAQP	60074	3875	5529.0	46	1122.0
24	584	LDAGWDWGH	60091	1636	4527.0	23	1023.0
25	605	SSWQPHAAL	60068	2865	2844.0	10	1818.0
26	628	SGHWGWYYA	60089	6822	6762.0	15	1023.0
27	655	PYSWDYHPS	60091	1512	5484.0	14	1218.0
28	701	PPLQYQSLW	60093	1501	3195.0	6	1074.0
29	777	YYAPWDWP	60062	1027	1020.0	2	1020.0
...
1603	30029	SLADGALPA	60067	4638	2331.0	15	1134.0

	index	ACCTNO	ZIP	ZIP4	LTD_SALES	LTD_TRANSACTIONS	YTD_SALE
1604	30041	WPWQSAYYY	60062	4938	2844.0	13	1038.0
1605	30061	HAYLQDGD	60062	5159	2466.0	5	2298.0
1606	30098	PGAGWYPHW	60067	4858	2919.0	10	1827.0
1607	30118	GSSDDHAD	60093	3828	10062.0	10	1728.0
1608	30120	SPSYSLDAA	60093	1638	4329.0	14	1416.0
1609	30148	WQDSWAQGG	60074	7042	3897.0	7	1008.0
1610	30151	ADAWGPSAP	60060	1021	2712.0	18	1377.0
1611	30160	AHWYWYAPH	60091	1134	6444.0	13	4173.0
1612	30172	SQHGQPYWD	60098	0	8238.0	14	1404.0
1613	30181	GPDQDAYYD	60098	3215	4557.0	4	1920.0
1614	30208	SLLWSDPQS	60098	8871	4071.0	13	1293.0
1615	30221	WPPPHLQPS	60098	8146	6768.0	14	2655.0
1616	30225	WDYHSAPDH	60098	8993	6090.0	11	1449.0
1617	30228	PGDAAPPD	60098	9446	1437.0	3	1437.0
1618	30233	LDDLASSS	60098	7855	12981.0	36	1308.0
1619	30260	LWYGPLGPS	60098	9011	4191.0	8	1158.0
1620	30283	WSAYGYYS	60098	3362	4203.0	7	1989.0
1621	30286	ASSAWWQHH	60098	7903	1380.0	4	1296.0
1622	30300	PWDWPPDAY	60098	7881	1929.0	6	1491.0
1623	30304	AQPLGQSHD	60098	4206	4608.0	17	1740.0
1624	30310	GGSDQLHGY	60098	2271	1068.0	2	1068.0
1625	30329	WSAGSPDPQ	60098	8877	3669.0	21	1263.0
1626	30330	WDGYGAQQH	60098	8048	2685.0	6	1296.0
1627	30336	PLHHGGQYH	60098	8075	6681.0	16	2985.0
1628	30358	LWWAWAPQD	60098	8091	21030.0	20	5322.0
1629	30379	AYQWWQLHY	60098	7943	4092.0	9	2625.0
1630	30406	WWQYYPSA	60098	3133	2100.0	3	1800.0
1631	30408	WLLWDLLYD	60098	7807	1827.0	2	1827.0
1632	30454	LLQLHHQYP	60098	7108	2184.0	3	1248.0

1633 rows × 11 columns

```
In [52]: # Get a list of all records in xyzcust table where YTD_SALES_2009 > 1000 and C  
         HANNEL_ACQUISITION = 'RT'  
         custtrans_channel=pd.read_sql_query("SELECT * FROM xyzcust WHERE YTD_SALES_200  
         9 > 1000 AND CHANNEL_ACQUISITION = 'RT'", engine)
```

In [53]: `custtrans_channel`

Out[53]:

	index	ACCTNO	ZIP	ZIP4	LTD_SALES	LTD_TRANSACTIONS	YTD_SALI
0	1	WQWAYHYLA	60091	1750	4227.0	9	1263.0
1	12	WLDAYHQLW	60091	2813	3240.0	7	2064.0
2	24	ASDHAYAW	60062	6077	3411.0	19	1875.0
3	31	HDWAWLH	60069	3402	25476.0	93	1623.0
4	77	LGDGQPGDH	60061	4540	2364.0	17	1359.0
5	78	GQHYPQYD	60093	2902	12828.0	51	1815.0
6	126	WYPYWWPQP	60091	1620	4812.0	23	1116.0
7	139	SGAHSWLHA	60093	3748	14448.0	5	14448.0
8	231	GHYYWDLAL	60093	1004	36495.0	97	5586.0
9	326	LPSLDDGYA	60062	5154	3435.0	16	1410.0
10	364	GHPGDAWDD	60098	2424	1272.0	6	1272.0
11	388	PWLYYQADS	60069	3211	3201.0	5	1029.0
12	397	WDDASHSAA	60062	6028	2148.0	9	1026.0
13	479	WGHGGADH	60067	6775	8943.0	40	1845.0
14	487	PGLQALDPY	60067	4242	7665.0	20	3702.0
15	493	PLDDDQHL	60076	2132	1170.0	8	1170.0
16	545	ALQSDWDWD	60091	3024	1362.0	3	1245.0
17	563	GGHAHHYDW	60091	1524	4341.0	17	1083.0
18	605	SSWQPHAAL	60068	2865	2844.0	10	1818.0
19	628	SGHWGWYYA	60089	6822	6762.0	15	1023.0
20	655	PYSWDYHPS	60091	1512	5484.0	14	1218.0
21	808	GHGLQQYYH	60081	8744	1320.0	1	1320.0
22	823	APLLSGSDG	60067	7900	6492.0	16	1209.0
23	844	WYAYGPPLP	60093	2436	7176.0	27	1461.0
24	879	DLHSWSDP	60091	1526	37998.0	53	5133.0
25	890	WPGWAWSQG	60089	3341	4464.0	14	2007.0
26	910	GHQASLYSH	60093	2521	4323.0	9	1395.0
27	1012	AGDDLWSWL	60056	2137	1806.0	5	1806.0
28	1021	YLSAYGS	60076	2844	1074.0	1	1074.0
29	1030	AAGSALPSD	60091	2158	3687.0	7	2097.0
...
1177	29978	ASHDGGYLY	60076	2854	2796.0	2	2730.0

	index	ACCTNO	ZIP	ZIP4	LTD_SALES	LTD_TRANSACTIONS	YTD_SALI
1178	29992	GPYSDDGPQ	60093	4251	2454.0	7	1704.0
1179	29996	GHPWWLHHD	60069	3062	1089.0	4	1089.0
1180	30024	SADWAGWQ	60091	1603	1425.0	3	1104.0
1181	30029	SLADGALPA	60067	4638	2331.0	15	1134.0
1182	30061	HAYLQDGD	60062	5159	2466.0	5	2298.0
1183	30098	PGAGWYPHW	60067	4858	2919.0	10	1827.0
1184	30118	GSSDDHAD	60093	3828	10062.0	10	1728.0
1185	30120	SPSYSLDAA	60093	1638	4329.0	14	1416.0
1186	30148	WQDSWAQGG	60074	7042	3897.0	7	1008.0
1187	30151	ADAWGPSAP	60060	1021	2712.0	18	1377.0
1188	30160	AHWYWYAPH	60091	1134	6444.0	13	4173.0
1189	30172	SQHGQPYWD	60098	0	8238.0	14	1404.0
1190	30181	GPDQDAYYD	60098	3215	4557.0	4	1920.0
1191	30208	SLLWSDPQS	60098	8871	4071.0	13	1293.0
1192	30221	WPPPHLQPS	60098	8146	6768.0	14	2655.0
1193	30225	WDYHSAPDH	60098	8993	6090.0	11	1449.0
1194	30260	LWYGPLGPS	60098	9011	4191.0	8	1158.0
1195	30283	WSAYGYYS	60098	3362	4203.0	7	1989.0
1196	30286	ASSAWWQHH	60098	7903	1380.0	4	1296.0
1197	30300	PWDWPPDAY	60098	7881	1929.0	6	1491.0
1198	30304	AQPLGQSHD	60098	4206	4608.0	17	1740.0
1199	30310	GGSDQLHGY	60098	2271	1068.0	2	1068.0
1200	30329	WSAGSPDPQ	60098	8877	3669.0	21	1263.0
1201	30330	WDGYGAQQH	60098	8048	2685.0	6	1296.0
1202	30336	PLHHGGQYH	60098	8075	6681.0	16	2985.0
1203	30358	LWWAWAPQD	60098	8091	21030.0	20	5322.0
1204	30379	AYQWWQLHY	60098	7943	4092.0	9	2625.0
1205	30408	WLLWDLLYD	60098	7807	1827.0	2	1827.0
1206	30454	LLQLHHQYP	60098	7108	2184.0	3	1248.0

1207 rows × 11 columns

```
In [58]: custtrans_counts=pd.read_sql_query("SELECT COUNT(*) FROM xyzcust WHERE YTD_SALES_2009 > 1000 AND CHANNEL_ACQUISITION = 'RT' AND ZIP = 60056", engine)
```

```
In [59]: custtrans_counts
```

```
Out[59]:
```

	COUNT(*)
0	49

```
In [ ]:
```