Database Challenge Solutions

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Complied by Ebude Yolande

```python
[4]: import sqlite3 as sq
     import pandas as pd
     import datetime as dtm
     import warnings
     warnings.filterwarnings('ignore')
```

0.0.1   1. Import "GeneratorRefilling.sqlite" and "3057.dat" and change the header of "3057.dat" to ['num','name','surname','date']

Import "GeneratorRefilling.sqlite"

```python
[5]: conn=sq.connect('GeneratorRefilling.sqlite')
     cur=conn.cursor()
     query="SELECT * FROM RefillingGen2018"
     data=pd.read_sql(query,conn)
     data.head(3)
```

```
[5]:   Generator Buyer_Name  Purchase_Quantity Purchase_Date Purchase_Time  \
     0   Genset1       Andy              756.0      02/01/15         15:25
     1   Genset5       Kate              163.5      04/01/15         10:45
     2   Genset9      Louis              860.0      06/01/15         15:45

        Payment      Mass  Generator_Amount Refilling_Name  Refilling_Quantity  \
     0   453600  628.992             756.0           Andy               756.0
     1    98100  136.032             163.5           Kate               163.5
     2   516000  715.520             860.0           Kate               800.0

       Refilling_Date Refilling_Time  Check
     0       03/01/15         07:10      1
     1       03/01/15         17:10      1
     2       06/01/15         17:40      1
```

Import 3057.dat and change the header of "3057.dat" to ['num','name','surname','date']

```python
[6]: tab = pd.read_table('3057.dat')
     temp=tab.columns
     tab.columns=['num','name','surname','date'] # change header
     tab.iloc[-1]=temp #assign header to last row
```

```
tab=tab.sort_index(by='num') # arrange num in ascending order
tab=tab[['num','name','surname','date']]
tab.head(3)
```

[6]:
```
       num        name   surname                       date
199      1    Penelope   Guiness   2013-05-26 14:47:57.62
8       10   Christian     Gable   2013-05-26 14:47:57.62
99     100     Spencer      Depp   2013-05-26 14:47:57.62
```

2. Create a table in the database for "3057.dat" called Tab3057

[10]:
```
tab.to_sql('Tab3057',conn)
```

3. Delete the "Tab3055" table

[11]:
```
query = "DROP TABLE Tab3055"
conn.execute(query)
```

[11]: `<sqlite3.Cursor at 0x15404a3c340>`

4. Add a row to Tab3057 table

[12]:
```
query= "INSERT INTO Tab3057('index','num','name','surname','date') VALUES␣
 ↪('99','5','Peal','Johnny Walker','2014-01-23 17:47:55')"
conn.execute(query)
query="SELECT * FROM  Tab3057"
tab3057=pd.read_sql(query,conn)
tab3057.tail(3)
```

[12]:
```
       index  num    name           surname                       date
198       97   98   Chris           Bridges   2013-05-26 14:47:57.62
199       98   99     Jim            Mostel   2013-05-26 14:47:57.62
200       99    5    Peal    Johnny Walker      2014-01-23 17:47:55
```

5. Delete the 3rd row of Tab3057

[13]:
```
query = "DELETE FROM Tab3057 WHERE num='5'"
conn.execute(query)
query="SELECT * FROM  Tab3057"
tab3057=pd.read_sql(query,conn)
tab3057.tail(3)
```

[13]:
```
       index  num    name   surname                       date
196       96   97     Meg     Hawke   2013-05-26 14:47:57.62
197       97   98   Chris   Bridges   2013-05-26 14:47:57.62
198       98   99     Jim    Mostel   2013-05-26 14:47:57.62
```

6. Add column 'Verify' to Tab3057
```

```
[14]: query = "ALTER TABLE Tab3057 ADD Verify Varchar(25)"
      conn.execute(query)
      query="SELECT * FROM  Tab3057"
      tab3057=pd.read_sql(query,conn)
      tab3057.tail(3)
```

```
[14]:        index  num   name  surname                    date  Verify
      196       96   97    Meg    Hawke  2013-05-26 14:47:57.62    None
      197       97   98  Chris  Bridges  2013-05-26 14:47:57.62    None
      198       98   99    Jim   Mostel  2013-05-26 14:47:57.62    None
```

```
[15]: query = "UPDATE Tab3057 SET Verify='0'"
      conn.execute(query)
      query = "UPDATE Tab3057 SET Verify='1' WHERE num>50 "
      conn.execute(query)
      query="SELECT * FROM  Tab3057"
      tab3057=pd.read_sql(query,conn)
      tab3057.tail(3)
```

```
[15]:        index  num   name  surname                    date  Verify
      196       96   97    Meg    Hawke  2013-05-26 14:47:57.62       1
      197       97   98  Chris  Bridges  2013-05-26 14:47:57.62       1
      198       98   99    Jim   Mostel  2013-05-26 14:47:57.62       1
```