sql-country-literacy

May 15, 2024

[1]:
```
import pandas as pd
import numpy as np

import warnings
warnings.filterwarnings('ignore')
```

[2]:
```
import sqlite3
%load_ext sql
conn=sqlite3.connect("Rence.db")
cur=conn.cursor()
```

[3]:
```
%sql sqlite:///Rence.db
```

[4]:
```
data=pd.read_csv(r"C:\Users\ADMIN\Desktop\country-literacy-rates.csv")
```

[12]:
```
data.to_sql('TBL2',conn)
```

[12]:
```
2316
```

Checking first 10 data entries from TBL2

[13]:
```
%sql select * from TBL2 limit 10
```

```
 * sqlite:///Rence.db
Done.
```

[13]:
```
[(0, 'Belgium', 'BEL', 1475, '10'),
 (1, 'France', 'FRA', 1475, '6'),
 (2, 'Germany', 'DEU', 1475, '9'),
 (3, 'Ireland', 'IRL', 1475, '0'),
 (4, 'Italy', 'ITA', 1475, '15'),
 (5, 'Netherlands', 'NLD', 1475, '17'),
 (6, 'Poland', 'POL', 1475, '0'),
 (7, 'Spain', 'ESP', 1475, '3'),
 (8, 'Sweden', 'SWE', 1475, '1'),
 (9, 'United Kingdom', 'GBR', 1475, '5')]
```

Checking data entity of Germany from TBL2

[14]:
```
%sql select * from TBL2 where entity='Germany';
```

```
 * sqlite:///Rence.db
Done.
```

[14]:
```
[(2, 'Germany', 'DEU', 1475, '9'),
 (12, 'Germany', 'DEU', 1550, '16'),
 (22, 'Germany', 'DEU', 1650, '31'),
 (32, 'Germany', 'DEU', 1750, '38'),
 (1131, 'Germany', 'DEU', 2003, '99')]
```

Checking data entity of Latvia from TBL2

[15]:
```
%sql select * from TBL2 where entity='Latvia';
```

```
 * sqlite:///Rence.db
Done.
```

[15]:
```
[(642, 'Latvia', 'LVA', 1989, '994.523'),
 (982, 'Latvia', 'LVA', 2000, '9.974.657'),
 (1572, 'Latvia', 'LVA', 2011, '998.959'),
 (1884, 'Latvia', 'LVA', 2015, '9.989.269'),
 (2221, 'Latvia', 'LVA', 2021, '99.89')]
```

Find the number of unique entity from TBL2

[16]:
```
%sql select count(distinct entity) from TBL2;
```

```
 * sqlite:///Rence.db
Done.
```

[16]:
```
[(270,)]
```

Find the name of the top 5 entities and their maximum number of its literacy

[19]:
```
%sql select entity, max(literacy) as number_of_literacy\
from TBL2\
group by entity\
order by max(literacy) desc limit 5
```

```
 * sqlite:///Rence.db
Done.
```

[19]:
```
[('Latvia', '998.959'),
 ('Lithuania', '998.156'),
 ('Estonia', '997.672'),
 ('Central Europe and the Baltics (WB)', '993.535'),
 ('Italy', '993.491')]
```

Find the name of the least 7 entities and their maximum number of its literacy

[20]:
```
%sql select entity, min(literacy) as number_of_literacy\
from TBL2\
group by entity\
order by min(literacy) limit 7
```

```
 * sqlite:///Rence.db
Done.
```

[20]:
```
[('Ireland', '0'),
 ('Poland', '0'),
 ('Sweden', '1'),
 ('Chad', '1.089.465'),
 ('Burkina Faso', '1.284.817'),
 ('Niger', '1.437.604'),
 ('Benin', '1.648.273')]
```

Find the year which had the maximum number of literacy

[22]:
```
%sql select year from TBL2 where literacy=998.959
```

```
 * sqlite:///Rence.db
Done.
```

[22]:
```
[(2011,)]
```

[32]:
```
%sql select entity,code,year, max(literacy)\
from TBL2;
```

```
 * sqlite:///Rence.db
Done.
```

[32]:
```
[('Latvia', 'LVA', 2011, '998.959')]
```

Find the entity and the year that had the least number of literacy

[31]:
```
%sql select entity, year, min(literacy)\
from TBL2
```

```
 * sqlite:///Rence.db
Done.
```

[31]:
```
[('Ireland', 1475, '0')]
```

What is the total number of literacy from the data

[33]:
```
%sql select count(literacy) as Total_Literacy from TBL2;
```

```
 * sqlite:///Rence.db
Done.
```

[33]:
```
[(2316,)]
```

What is the number of literacy before the year 2000

[35]:
```
%sql select count(literacy)from TBL2 where year <2000;
```

```
 * sqlite:///Rence.db
Done.
```

[35]:
```
[(935,)]
```

What is the number of literacy from 2000 to 2022

[37]:
```
%sql select max(year) from TBL2;
```

```
 * sqlite:///Rence.db
Done.
```

[37]:
```
[(2022,)]
```

[38]:
```
%sql select count(literacy)from TBL2 where year between 2000 and 2022;
```

```
 * sqlite:///Rence.db
Done.
```

[38]:
```
[(1381,)]
```

[ ]: