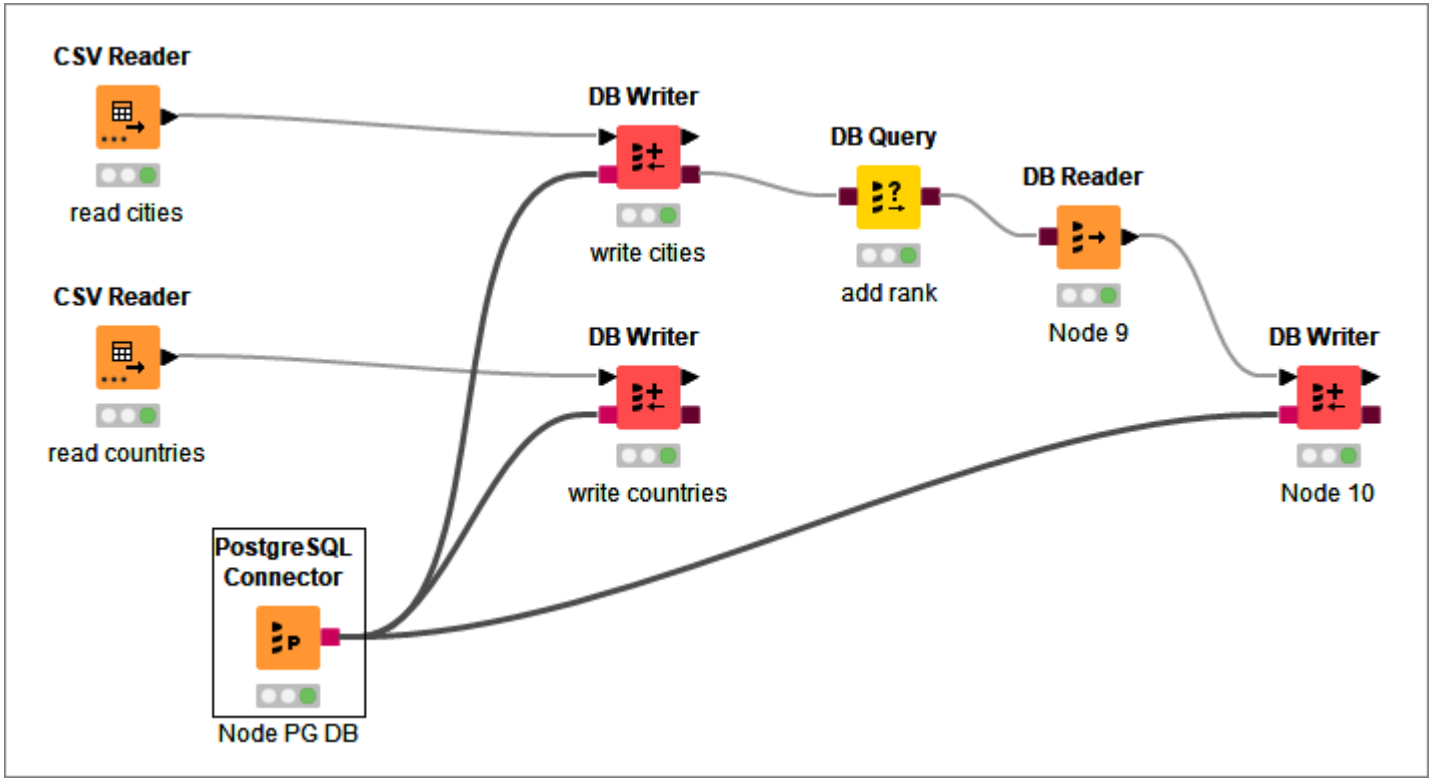
Reporting based on data from geonames.org

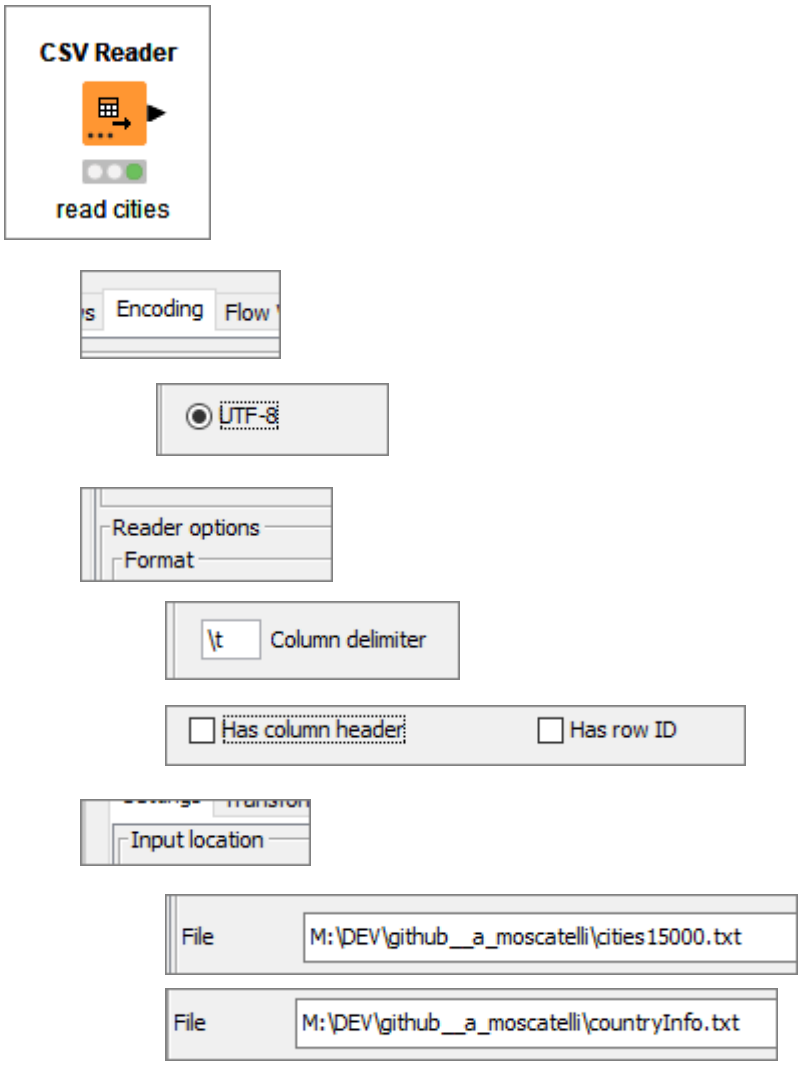
http://download.geonames.org/export/dump/readme.txt

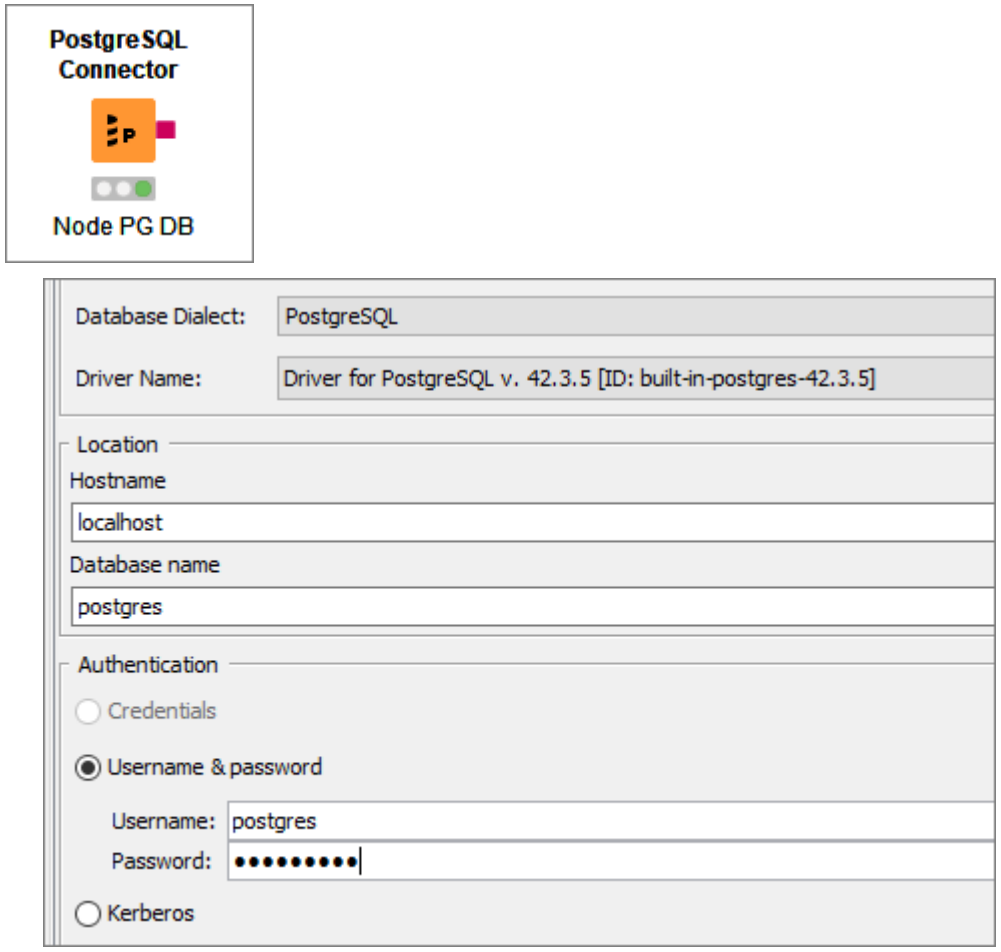
KNIME wf

KNIME 4.6.1



KNIME cfg 1


CSV Reader
read cities
Encoding
Flow
UTF-8
Reader options
Format
\t
Column delimiter
Has column header
Has row ID
Input location
File
M:\DEV\github__a_moscatelli\cities15000.txt
File
M:\DEV\github__a_moscatelli\countryInfo.txt


PostgreSQL Connector
Node PG DB
Database Dialect:
PostgreSQL
Driver Name:
Driver for PostgreSQL v. 42.3.5 [ID: built-in-postgres-42.3.5]
Location
Hostname
localhost
Database name
postgres
Authentication
Credentials
Username & password
Username:
postgres
Password:
Kerberos

KNIME cfg 2

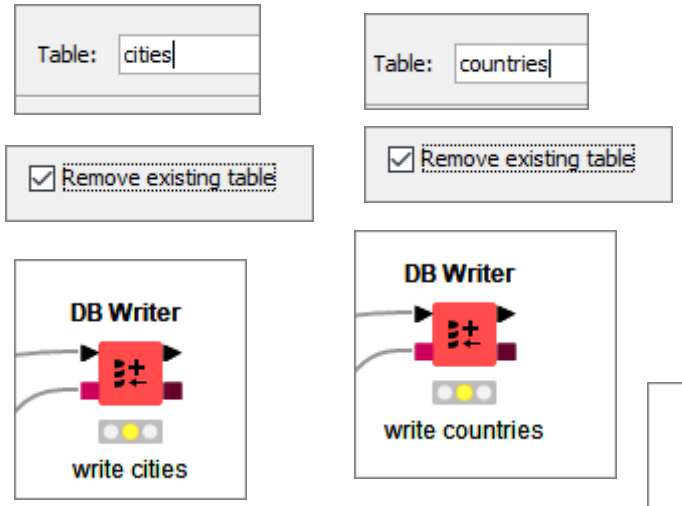
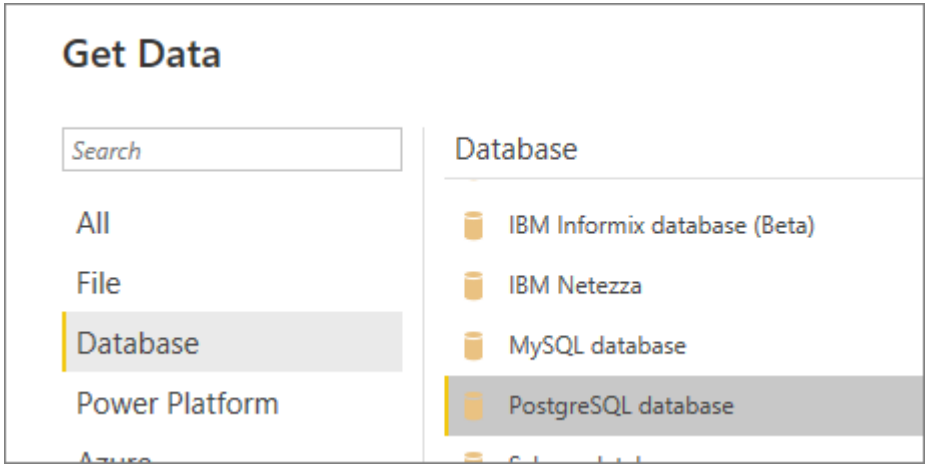
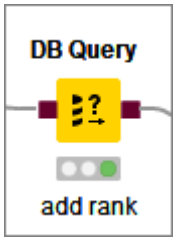


Table: cities
Remove existing table
DB Writer
write cities
Table: countries
Remove existing table
DB Writer
write countries


Get Data
Search
All
File
Database
Power Platform
Database
IBM Informix database (Beta)
IBM Netezza
MySQL database
PostgreSQL database

KNIME cfg 3

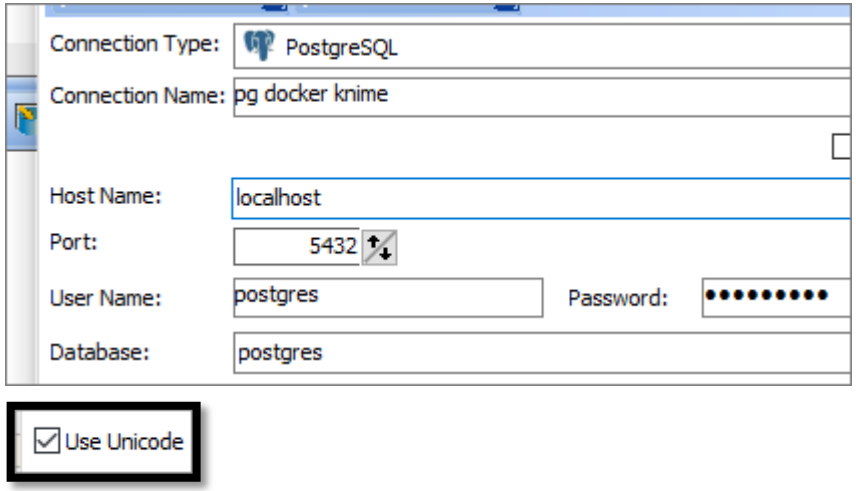


SQL Statement

```
1  select
2  ct."Column0" as ctid,
3  ct."Column1" as ctnm,
4  ct."Column14" as ctpop,
5  ct."Column8" as ctcn,
6  RANK() OVER(
7    PARTITION BY ct."Column8"
8    ORDER BY ct."Column14" desc
9  ) AS ct_populrank_in_cn
10 from #table# as ct
11
```

```
select
ct."Column0" as ctid,
ct."Column1" as ctnm,
ct."Column14" as ctpop,
ct."Column8" as ctcn,
RANK() OVER(
  PARTITION BY ct."Column8"
  ORDER BY ct."Column14" desc
) AS ct_populrank_in_cn
from public.cities as ct
```

DB client


Connection Type:
PostgreSQL
Connection Name:
pg docker knime
Host Name:
localhost
Port:
5432
User Name:
postgres
Password:
Database:
postgres
Use Unicode

SQL v1

```
select
 cn."Column4" country,
ct."Column1" country_maxpopcity_name,
 ct."Column14" country_maxpopcity_pop
 from public.cities ct, public.countries cn
 where cn."Column0" = ct."Column8"
 and not exists (
  select * from public.cities ultract
  where
  ultract."Column14" > ct."Column14"
  and ultract."Column8" = ct."Column8"
  )
  order by ct."Column14" desc  limit 15
```

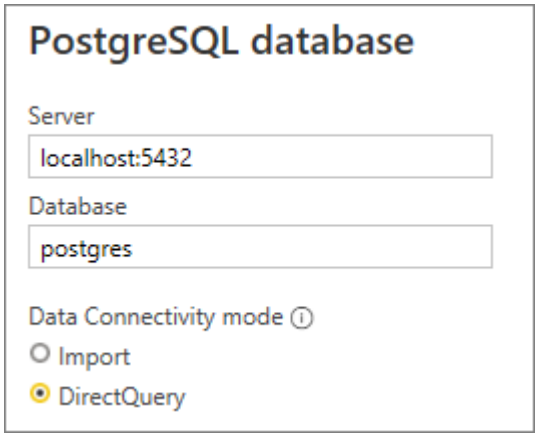
	country	country_maxpopcity_name	country_maxpopcity_pop
1	China	Shanghai	22315474
2	Argentina	Buenos Aires	13076300
3	India	Mumbai	12691836
4	Mexico	Mexico City	12294193
5	Pakistan	Karachi	11624219
6	Turkey	İstanbul	11174257
7	Philippines	Manila	10444527
8	Russia	Moscow	10381222
9	Bangladesh	Dhaka	10356500
10	South Korea	Seoul	10349312
11	Brazil	São Paulo	10021295
12	Nigeria	Lagos	9000000
13	Indonesia	Jakarta	8540121
14	Japan	Tokyo	8336599
15	United States	New York City	8175133

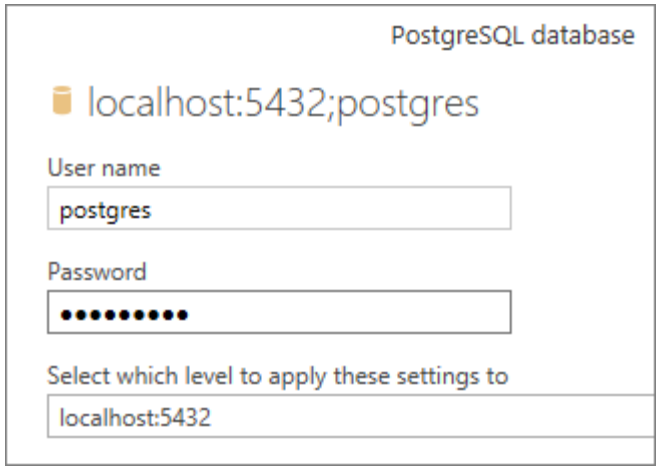
SQL v2 = v1

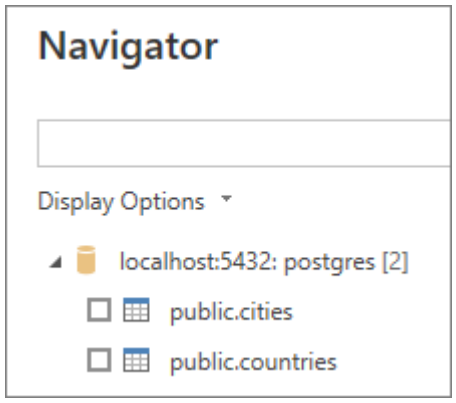
```
select
cn."Column4" as country,
ctr.ctnm as country_maxpopcity_name,
ctr.ctpop as country_maxpopcity_pop
from  (
select
ct."Column1" as ctnm,
ct."Column14" as ctpop,
ct."Column8" as ctcn,
RANK() OVER(
  PARTITION BY ct."Column8"
  ORDER BY ct."Column14" desc
) AS ct_rank_in_cn
from public.cities ct) ctr,
public.countries cn
where cn."Column0" = ctr.ctcn
and ctr.ct_rank_in_cn=1
order by ctpop desc limit 15
```

	country	country_maxpopcity_name	country_maxpopcity_pop
1	China	Shanghai	22315474
2	Argentina	Buenos Aires	13076300
3	India	Mumbai	12691836
4	Mexico	Mexico City	12294193
5	Pakistan	Karachi	11624219
6	Turkey	İstanbul	11174257
7	Philippines	Manila	10444527
8	Russia	Moscow	10381222
9	Bangladesh	Dhaka	10356500
10	South Korea	Seoul	10349312
11	Brazil	São Paulo	10021295
12	Nigeria	Lagos	9000000
13	Indonesia	Jakarta	8540121
14	Japan	Tokyo	8336599
15	United States	New York City	8175133

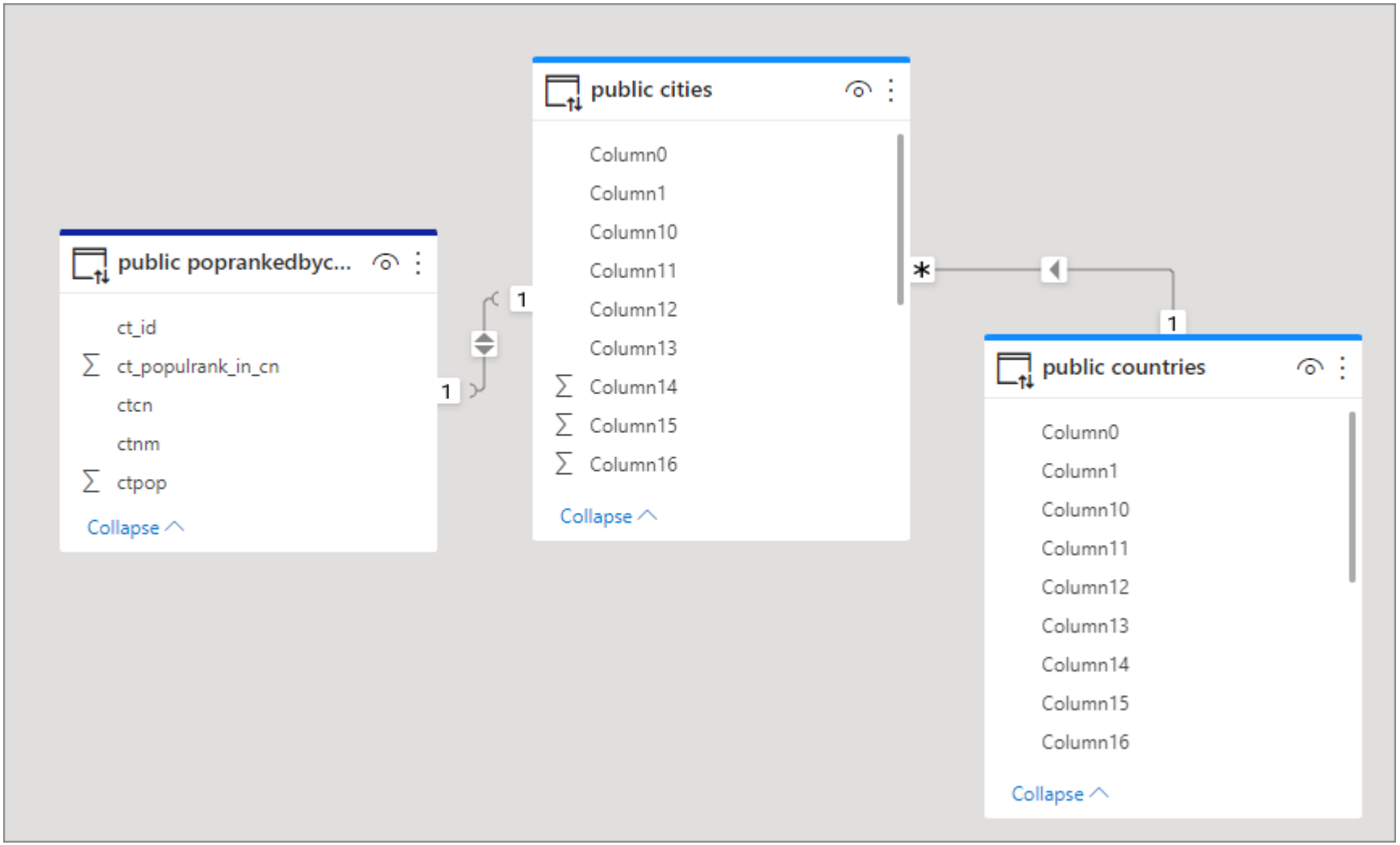
PowerBI cfg


PostgreSQL database
Server
localhost:5432
Database
postgres
Data Connectivity mode
Import
DirectQuery


PostgreSQL database
localhost:5432;postgres
User name
postgres
Password
Select which level to apply these settings to
localhost:5432

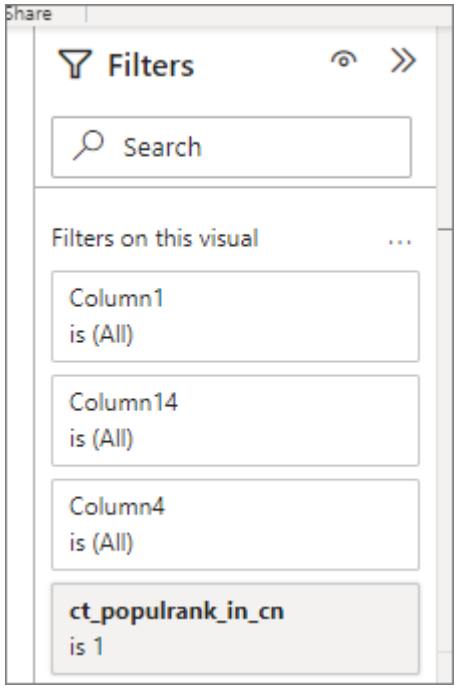

Navigator
Display Options
localhost:5432: postgres [2]
public.cities
public.countries

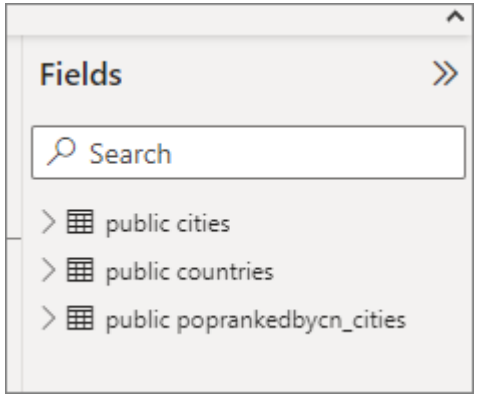
PowerBI rels



powerBI report

Column4	Column1	Column14	ct_populrank_in_cn
China	Shanghai	22315474	1
Argentina	Buenos Aires	13076300	1
India	Mumbai	12691836	1
Mexico	Mexico City	12294193	1
Pakistan	Karachi	11624219	1
Turkey	İstanbul	11174257	1
Philippines	Manila	10444527	1
Russia	Moscow	10381222	1
Bangladesh	Dhaka	10356500	1
South Korea	Seoul	10349312	1
Brazil	São Paulo	10021295	1
Nigeria	Lagos	9000000	1
Indonesia	Jakarta	8540121	1
Japan	Tokyo	8336599	1
United States	New York City	8175133	1
Taiwan	Taipei	7871900	1
Total		**433909086**	**244**





END