In [1]:
```
import csv, sqlite3

con = sqlite3.connect("RealWorldData.db")
cur = con.cursor()
```

In [2]:
```
import pandas as pd
```

In [3]:
```
%load_ext sql
```

In [4]:
```
%sql sqlite:///RealWorldData.db
```

In [5]:
```
import pandas
df = pandas.read_csv("ChicagoCensusData.csv")
df.to_sql("CENSUS_DATA", con, if_exists='replace', index=False,method="multi")

df = pandas.read_csv("ChicagoCrimeData.csv")
df.to_sql("CHICAGO_CRIME_DATA", con, if_exists='replace', index=False, method="multi")

df = pandas.read_csv("ChicagoPublicSchools.csv")
df.to_sql("CHICAGO_PUBLIC_SCHOOLS_DATA", con, if_exists='replace', index=False, method="multi")
```

Out[5]:
```
566
```

In [6]:
```
%sql SELECT name FROM sqlite_master WHERE type='table'
```

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

Out[6]:

name
CENSUS_DATA
CHICAGO_CRIME_DATA
CHICAGO_PUBLIC_SCHOOLS_DATA

The total number of crimes recorded in the CRIME table.

In [8]:
```
%sql select count(CASE_NUMBER) from CHICAGO_CRIME_DATA
```

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

Out[8]:

count(CASE_NUMBER)
533

List community areas with per capita income less than 11000.

In [10]:
```
%sql select COMMUNITY_AREA_NUMBER, COMMUNITY_AREA_NAME from CENSUS_DATA WHERE PER_CAPITA_INCOME < 11000;
```

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

Out[10]:

COMMUNITY_AREA_NUMBER	COMMUNITY_AREA_NAME
26.0	West Garfield Park
30.0	South Lawndale
37.0	Fuller Park
54.0	Riverdale

List all case numbers for crimes involving minors

In [11]:
```
%sql SELECT CASE_NUMBER FROM CHICAGO_CRIME_DATA WHERE DESCRIPTION LIKE '%MINOR%';
```

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

Out[11]:

CASE_NUMBER
HL266884
HK238408

List all kidnapping crimes involving a child

In [12]:
```
%sql SELECT CASE_NUMBER FROM CHICAGO_CRIME_DATA WHERE PRIMARY_TYPE LIKE '%KIDNAPPING%'AND PRIMARY_TYPE NOT LIKE '%MINOR%';
```

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

Out[12]:

CASE_NUMBER
HN144152

The kind of crimes were recorded at schools

In [13]:
```
%sql SELECT DISTINCT PRIMARY_TYPE FROM CHICAGO_CRIME_DATA WHERE LOCATION_DESCRIPTION LIKE '%SCHOOL%';
```

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

Out[13]:

PRIMARY_TYPE
BATTERY
CRIMINAL DAMAGE
NARCOTICS
ASSAULT
CRIMINAL TRESPASS
PUBLIC PEACE VIOLATION

List the average safety score for all types of schools.

In [22]:
```
%%sql SELECT 'Elementary, Middle, or High School' as SchoolType, round(AVG(safety_score),2) as AverageSafetyScore
FROM CHICAGO_PUBLIC_SCHOOLS_DATA
GROUP BY 'Elementary, Middle, or High School';
```

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

Out[22]:

SchoolType	AverageSafetyScore
Elementary, Middle, or High School	49.5

List 5 community areas with highest % of households below poverty line.

In [16]:
```
%%sql
SELECT COMMUNITY_AREA_NAME, PERCENT_HOUSEHOLDS_BELOW_POVERTY FROM CENSUS_DATA
ORDER BY PERCENT_HOUSEHOLDS_BELOW_POVERTY DESC
LIMIT 5;
```

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

Out[16]:

COMMUNITY_AREA_NAME	PERCENT_HOUSEHOLDS_BELOW_POVERTY
Riverdale	56.5
Fuller Park	51.2
Englewood	46.6
North Lawndale	43.1
East Garfield Park	42.4

The community area(number) that is most crime prone

In [17]:
```
%%sql
SELECT COMMUNITY_AREA_NUMBER, COUNT(*) AS CrimeCount
FROM CHICAGO_CRIME_DATA
GROUP BY COMMUNITY_AREA_NUMBER
ORDER BY CrimeCount DESC
LIMIT 1;
```

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

Out[17]:

COMMUNITY_AREA_NUMBER	CrimeCount
25.0	43

The name of the community area with highest hardship index using sub-query

In [18]:
```
%%sql
SELECT COMMUNITY_AREA_NAME
FROM CENSUS_DATA
WHERE HARDSHIP_INDEX = (
    SELECT MAX(HARDSHIP_INDEX)
    FROM CENSUS_DATA
);
```

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

Out[18]:

COMMUNITY_AREA_NAME
Riverdale

The Community Area Name with most number of crimes using sub-query

In [19]:
```
%%sql
SELECT COMMUNITY_AREA_NAME
FROM CENSUS_DATA
WHERE COMMUNITY_AREA_NUMBER = (
    SELECT COMMUNITY_AREA_NUMBER
    FROM CHICAGO_CRIME_DATA
    GROUP BY COMMUNITY_AREA_NUMBER
    ORDER BY COUNT(*) DESC
    LIMIT 1
);
```

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

Out[19]:

COMMUNITY_AREA_NAME
Austin