

## Query Database Like you Chat

You:

For each year, how many five to nine year olds are in Kentucky?

### Question:

For each year, how many five to nine year olds are in Kentucky?

### SQL Prompt:

Please return a syntactically correct SQLite query answering the following question:

For each year, how many five to nine year olds are in Kentucky?

Using the table information below:

Table Name	Column Name	Column T
acs	Unnamed: 0	INTEGER
acs	Geography	TEXT
acs	Geographic Area Name	TEXT
acs	Total population	INTEGER
acs	Male	INTEGER
acs	Female	INTEGER
acs	Under 5 years	INTEGER
acs	5 to 9 years	INTEGER
acs	10 to 14 years	INTEGER
acs	15 to 19 years	INTEGER
acs	20 to 24 years	INTEGER
acs	25 to 34 years	INTEGER
acs	35 to 44 years	INTEGER
acs	45 to 54 years	INTEGER
acs	55 to 59 years	INTEGER
acs	60 to 64 years	INTEGER
acs	65 to 74 years	INTEGER
acs	75 to 84 years	INTEGER
acs	85 years and over	INTEGER
acs	Median age (years)	REAL
acs	18 years and over	INTEGER
acs	21 years and over	INTEGER
acs	65 years and over	INTEGER
acs	One race	INTEGER
acs	Two or more races	INTEGER
acs	White	INTEGER
acs	Black or African American	INTEGER
acs	American Indian and Alaska Native	INTEGER
acs	Asian	INTEGER
acs	Native Hawaiian and Other Pacific Islander	INTEGER
acs	Some other race	INTEGER
acs	Hispanic or Latino (of any race)	INTEGER
acs	Not Hispanic or Latino	INTEGER
acs	Total housing units_x	INTEGER
acs	YEAR	INTEGER
acs	Total households	REAL
acs	Households with one or more people under 18 years	REAL
acs	Households with one or more people 65 years and over	REAL
acs	Average household size	REAL
acs	Males 15 years and over	REAL
acs	Never married, Males 15 years and over	REAL
acs	Now married, except separated, Males 15 years and over	REAL
acs	Separated, Males 15 years and over	REAL
acs	Widowed, Males 15 years and over	REAL
acs	Divorced, Males 15 years and over	REAL
acs	Females 15 years and over	REAL
acs	Never married, Females 15 years and over	REAL
acs	Now married, except separated, Females 15 years and over	REAL
acs	Separated, Females 15 years and over	REAL
acs	Widowed, Females 15 years and over	REAL
acs	Divorced, Females 15 years and over	REAL
acs	Population 3 years and over enrolled in school	REAL
acs	Population 25 years and over	REAL
acs	Less than 9th grade	REAL
acs	9th to 12th grade, no diploma	REAL
acs	High school graduate (includes equivalency)	REAL
acs	Some college, no degree	REAL
acs	Associate's degree	REAL
acs	Bachelor's degree	REAL
acs	Graduate or professional degree	REAL

acs	Native	REAL
acs	Foreign born	REAL
acs	Language other than English	REAL
acs	Population 16 years and over	INTEGER
acs	In labor force	INTEGER
acs	Civilian labor force	INTEGER
acs	Employed	INTEGER
acs	Unemployed	INTEGER
acs	Armed Forces	INTEGER
acs	Not in labor force	INTEGER
acs	Civilian employed population 16 years and over	INTEGER
acs	Management, business, science, and arts occupations	INTEGER
acs	Service occupations	INTEGER
acs	Sales and office occupations	INTEGER
acs	Natural resources, construction, and maintenance occupations	INTEGER
acs	Production, transportation, and material moving occupations	INTEGER
acs	Median family income (dollars)	INTEGER
acs	Mean family income (dollars)	INTEGER
acs	Per capita income (dollars)	INTEGER
acs	Civilian noninstitutionalized population	INTEGER
acs	With health insurance coverage	INTEGER
acs	With private health insurance	INTEGER
acs	With public coverage	INTEGER
acs	No health insurance coverage	INTEGER
acs	Total housing units_y	INTEGER
acs	Occupied housing units	INTEGER
acs	Vacant housing units	INTEGER
acs	Homeowner vacancy rate	REAL
acs	Rental vacancy rate	REAL
acs	Median rooms	REAL
acs	Median (dollars), Value	INTEGER
acs	Owner-occupied units	INTEGER
acs	Housing units with a mortgage	INTEGER
acs	Housing units without a mortgage	INTEGER
acs	Median (dollars), Rent	INTEGER
acs	No rent paid	INTEGER

Always quote the table columns used in the query.

If you are not able to exactly answer the question, please return the following mess

I am not able to answer the question exactly.

SQL:

```
SELECT YEAR, SUM(`5 to 9 years`) AS `Number of 5 to 9 year olds in Kentucky`
FROM acs
WHERE Geography = '0400000US21'
GROUP BY YEAR
```

Result:

YEAR	Number of 5 to 9 year olds in Kentucky
2012	280790
2013	282464
2014	282577
2015	281090
2016	282564
2017	280088
2018	281151
2019	275466
2020	275013
2021	279548

Readable Format Prompt:

Please put the following result in readable format:

YEAR	Number of 5 to 9 year olds in Kentucky
2012	280790
2013	282464
2014	282577
2015	281090
2016	282564
2017	280088
2018	281151

2019	275466
2020	275013
2021	279548

It was generated by this SQL query:

```
SELECT YEAR, SUM(`5 to 9 years`) AS `Number of 5 to 9 year olds in Kentucky`  
FROM acs  
WHERE Geography = '0400000US21'  
GROUP BY YEAR
```

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### Readable Format:

Year	Number of 5 to 9 year olds in Kentucky
2012	280,790
2013	282,464
2014	282,577
2015	281,090
2016	282,564
2017	280,088
2018	281,151
2019	275,466
2020	275,013
2021	279,548

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### Plot Prompt:

Please return Python code to plot Pandas DataFrame self.df, containing this:

YEAR	Number of 5 to 9 year olds in Kentucky
2012	280790
2013	282464
2014	282577
2015	281090
2016	282564
2017	280088
2018	281151
2019	275466
2020	275013
2021	279548

The code should not create a new data frame but use the existing Pandas DataFrame, s  
Also, the code should not show the plot, but save it as a file named "\_plot.png".

The data answers this question:

For each year, how many five to nine year olds are in Kentucky?

Which was generated by this SQL query:

```
SELECT YEAR, SUM(`5 to 9 years`) AS `Number of 5 to 9 year olds in Kentucky`  
FROM acs  
WHERE Geography = '0400000US21'  
GROUP BY YEAR
```

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### Python Code for Plot:

```
# Import necessary libraries  
import matplotlib.pyplot as plt  
  
# Set x and y values for the plot  
x_values = self.df['YEAR']  
y_values = self.df['Number of 5 to 9 year olds in Kentucky']  
  
# Create the plot  
plt.plot(x_values, y_values)  
  
# Add labels and title  
plt.xlabel('YEAR')  
plt.ylabel('Number of 5 to 9 year olds in Kentucky')  
plt.title('5 to 9 Year Olds in Kentucky from 2012-2021')  
  
# Save the plot as a file  
plt.savefig('_plot.png')
```

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## More than one data point:

True

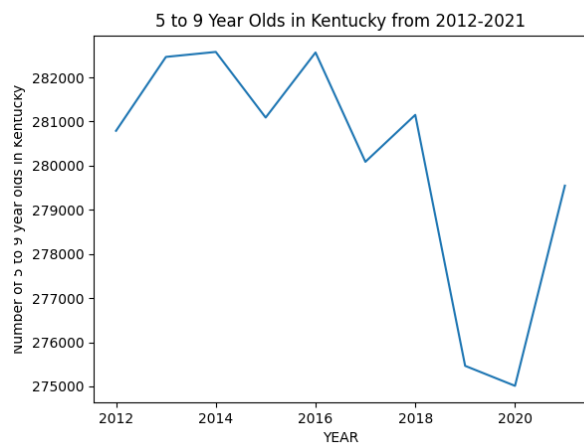
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## Plot Code Error:

False

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## Plot:



For each year, how many five to nine year olds are in Kentucky?

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