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In [2]: 1 import pandas as pd

In [4]: 1 dataset= pd.read_csv('C:\\Users\\user\\OneDrive\\Documents\\census.csv')

In [5]: 1 dataset.head()
Out[5]:

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| | SUMLEV | REGION | DIVISION | STATE | COUNTY | STNAME | CTYNAME | CENSUS2010POP | ESTIMATESBASE2010 | POPEST |
|---|--------|--------|----------|-------|--------|---------|----------------|---------------|-------------------|--------|
| 0 | 40 | 3 | 6 | 1 | 0 | Alabama | Alabama | 4779736 | 4780127 | |
| 1 | 50 | 3 | 6 | 1 | 1 | Alabama | Autauga County | 54571 | 54571 | |
| 2 | 50 | 3 | 6 | 1 | 3 | Alabama | Baldwin County | 182265 | 182265 | |
| 3 | 50 | 3 | 6 | 1 | 5 | Alabama | Barbour County | 27457 | 27457 | |
| 4 | 50 | 3 | 6 | 1 | 7 | Alabama | Bibb County | 22915 | 22919 | |

5 rows × 100 columns

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In [6]: 1 counties = dataset[dataset['SUMLEV'] == 50]

In [7]: 1 counties_per_state = counties['STNAME'].value_counts().sort_values(ascending=False)
        2

In [8]: 1 state_with_most_counties = counties_per_state.index[0]
        2
        3 print("The state with the most counties is:", state_with_most_counties)

The state with the most counties is: Texas

In [ ]: 1 ##2. Only Looking at the three most populous countries for each state, what are the three most
        2 states (in order of highest population to lowest population)? Use CENSUS2010POP

In [14]: 1 counties = dataset[dataset['SUMLEV'] == 50]

In [15]: 1 top_counties = counties.groupby('STNAME')['CENSUS2010POP'].apply(lambda x: x.nlargest(3).sum())
        2

In [16]: 1 top_states = top_counties.sort_values(ascending=False).head(3)

In [18]: 1 print("The three most populous states (considering only the three most populous counties for each state) are:")
        2 for state, population in top_states.items():
        3     print(state, "- Population:", population)

The three most populous states (considering only the three most populous counties for each state) are:
California - Population: 15924150
Texas - Population: 8269632
Illinois - Population: 6815061

In [ ]: 1 ##Which city has the most countries in it?

In [20]: 1 country_counts = dataset.groupby('CTYNAME')['COUNTY'].nunique()

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In [21]: 1 city_with_most_countries = country_counts.idxmax()
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In [22]: 1 print("The city with the most countries is:", city_with_most_countries)
```

The city with the most countries is: Washington County

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In [ ]: 1 ##Which region has the most division in it?
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In [23]: 1 division_counts = dataset.groupby('REGION')['DIVISION'].nunique()
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In [24]: 1 region_with_most_divisions = division_counts.idxmax()
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In [25]: 1 print("The region with the most divisions is:", region_with_most_divisions)
```

The region with the most divisions is: 3

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In [ ]: 1
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