In [9]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt

In [10]: data = pd.read_csv('world_population.csv')

In [11]: data.head(10)

Out[11]:

| | Rank | CCA3 | Country/Territory | Capital | Continent | 2022 Population | 2020 Population | 2015 Population | Pc |
|---|------|------|------------------------|---------------------|------------------|--------------------|--------------------|--------------------|----|
| 0 | 36 | AFG | Afghanistan | Kabul | Asia | 41128771 | 38972230 | 33753499 | 2 |
| 1 | 138 | ALB | Albania | Tirana | Europe | 2842321 | 2866849 | 2882481 | |
| 2 | 34 | DZA | Algeria | Algiers | Africa | 44903225 | 43451666 | 39543154 | 3 |
| 3 | 213 | ASM | American Samoa | Pago Pago | Oceania | 44273 | 46189 | 51368 | |
| 4 | 203 | AND | Andorra | Andorra la Vella | Europe | 79824 | 77700 | 71746 | |
| 5 | 42 | AGO | Angola | Luanda | Africa | 35588987 | 33428485 | 28127721 | 2 |
| 6 | 224 | AIA | Anguilla | The Valley | North America | 15857 | 15585 | 14525 | |
| 7 | 201 | ATG | Antigua and Barbuda | Saint John's | North America | 93763 | 92664 | 89941 | |
| 8 | 33 | ARG | Argentina | Buenos Aires | South America | 45510318 | 45036032 | 43257065 | 2 |
| 9 | 140 | ARM | Armenia | Yerevan | Asia | 2780469 | 2805608 | 2878595 | |
| 4 | | | | | | | | | • |

In [12]: data.describe()

Out[12]:

| | Rank | 2022 Population | 2020 Population | 2015 Population | 2010 Population | 2000 Population | |
|-------|------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| count | 234.000000 | 2.340000e+02 | 2.340000e+02 | 2.340000e+02 | 2.340000e+02 | 2.340000e+02 | 2 |
| mean | 117.500000 | 3.407441e+07 | 3.350107e+07 | 3.172996e+07 | 2.984524e+07 | 2.626947e+07 | 2 |
| std | 67.694165 | 1.367664e+08 | 1.355899e+08 | 1.304050e+08 | 1.242185e+08 | 1.116982e+08 | 9 |
| min | 1.000000 | 5.100000e+02 | 5.200000e+02 | 5.640000e+02 | 5.960000e+02 | 6.510000e+02 | 7 |
| 25% | 59.250000 | 4.197385e+05 | 4.152845e+05 | 4.046760e+05 | 3.931490e+05 | 3.272420e+05 | 2 |
| 50% | 117.500000 | 5.559944e+06 | 5.493074e+06 | 5.307400e+06 | 4.942770e+06 | 4.292907e+06 | 3 |
| 75% | 175.750000 | 2.247650e+07 | 2.144798e+07 | 1.973085e+07 | 1.915957e+07 | 1.576230e+07 | 1 |
| max | 234.000000 | 1.425887e+09 | 1.424930e+09 | 1.393715e+09 | 1.348191e+09 | 1.264099e+09 | 1 |
| 4 | | | | | | | > |

```
In [13]: data.info()
```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 234 entries, 0 to 233
Data columns (total 17 columns):

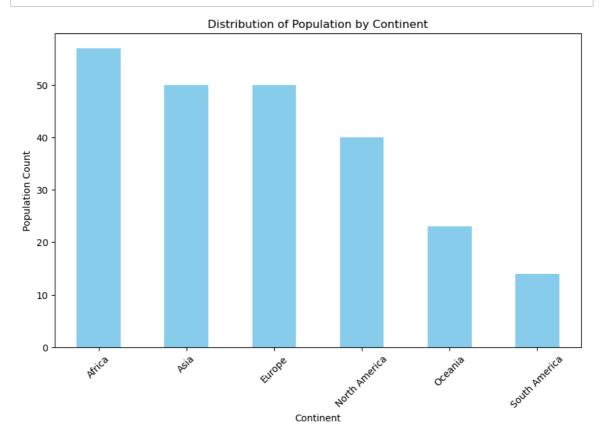
| # | Column | Non-Null Count | Dtype | | | |
|--|-----------------------------|----------------|---------|--|--|--|
| | | | | | | |
| 0 | Rank | 234 non-null | int64 | | | |
| 1 | CCA3 | 234 non-null | object | | | |
| 2 | Country/Territory | 234 non-null | object | | | |
| 3 | Capital | 234 non-null | object | | | |
| 4 | Continent | 234 non-null | object | | | |
| 5 | 2022 Population | 234 non-null | int64 | | | |
| 6 | 2020 Population | 234 non-null | int64 | | | |
| 7 | 2015 Population | 234 non-null | int64 | | | |
| 8 | 2010 Population | 234 non-null | int64 | | | |
| 9 | 2000 Population | 234 non-null | int64 | | | |
| 10 | 1990 Population | 234 non-null | int64 | | | |
| 11 | 1980 Population | 234 non-null | int64 | | | |
| 12 | 1970 Population | 234 non-null | int64 | | | |
| 13 | Area (km²) | 234 non-null | int64 | | | |
| 14 | Density (per km²) | 234 non-null | float64 | | | |
| 15 | Growth Rate | 234 non-null | float64 | | | |
| 16 | World Population Percentage | 234 non-null | float64 | | | |
| dtypes: float64(3), int64(10), object(4) | | | | | | |

dtypes: float64(3), int64(10), object(4)

memory usage: 31.2+ KB

```
In [14]: counts_continents = data['Continent'].value_counts()
```

```
In [15]: plt.figure(figsize=(10, 6))
    counts_continents.plot(kind='bar', color='skyblue')
    plt.title('Distribution of Population by Continent')
    plt.xlabel('Continent')
    plt.ylabel('Population Count')
    plt.xticks(rotation=45) # Rotate x-axis labels for better readability
    plt.show()
```



```
In [16]: plt.figure(figsize=(10, 6))
    plt.hist(data['2010 Population'], bins=30, color='lightgreen', edgecolor='b
    plt.title('Distribution of Population')
    plt.xlabel('Population')
    plt.ylabel('Frequency')
    plt.grid(True)
    plt.show()
```

