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DSC 640: Data Presentation & Visualization - Winter 2023

WEEKS 3-4 Exercises: Line Charts and Step Charts

Importing Libraries.

In [1]:
```
import os
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt

import warnings
warnings.filterwarnings('ignore')

# nltk.download('example')
```

Importing Data.

In [2]:
```
population_df = pd.read_excel('/Users/aaronbrown/Documents/Classwork/DSC 640 - Data Presentation and Visualization/Data/world-population.xlsm')
```

In [3]:
```
population_data = population_df
population_data.head(3)
```

Out[3]:

	Year	Population
0	1960	3028654024
1	1961	3068356747
2	1962	3121963107

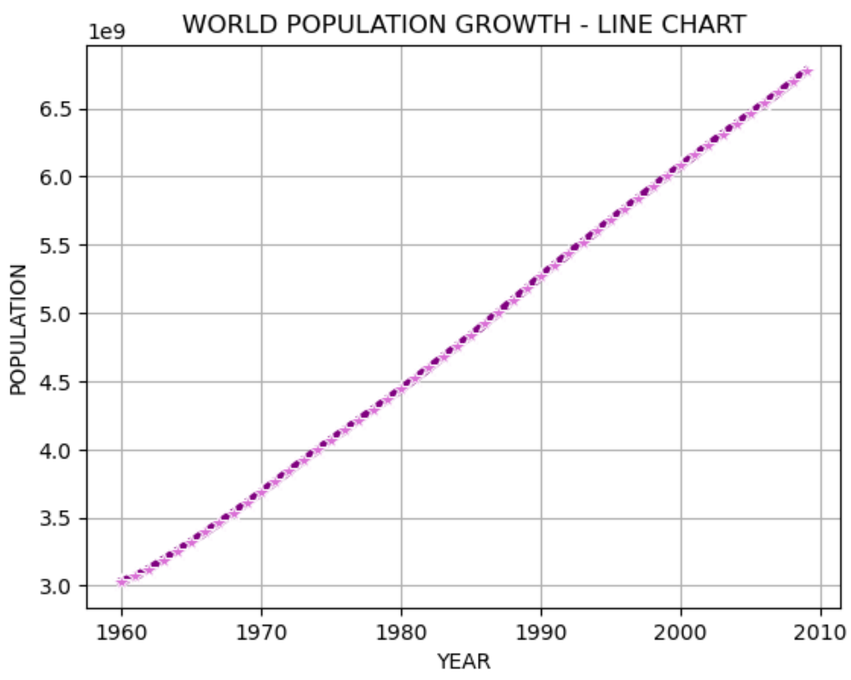
In [4]:
```
population_data = population_df
population_data.tail(3)
```

Out[4]:

	Year	Population
47	2007	6614396907
48	2008	6692030277
49	2009	6775235741

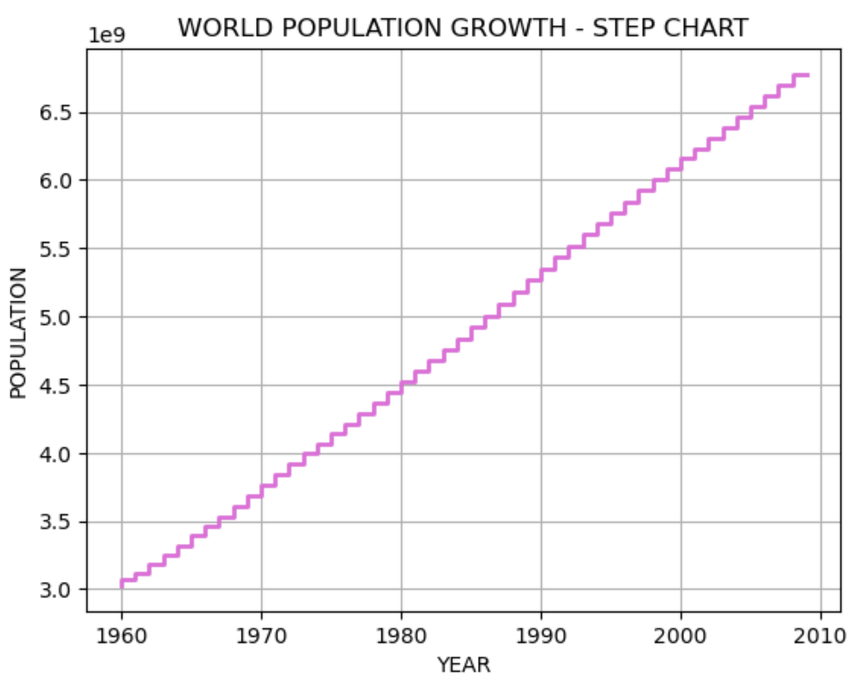
Generating Line Chart.

In [5]:
```
sns.lineplot(y = 'Population', x = 'Year', data = population_data, color='purple', linewidth = 4, marker='*', markerfacecolor='orchid', markersize = 9).set(title='WORLD POPULATION GROWTH - LINE CHART',
plt.grid(True)
```



Generating Step Chart.

In [6]:
```
plt.step(x = population_data['Year'], y = population_data['Population'], color='orchid', linewidth = 2)
plt.title("WORLD POPULATION GROWTH - STEP CHART")
plt.xlabel("YEAR")
plt.ylabel("POPULATION")
plt.grid(True)
plt.show()
```



References

matplotlib.pyplot.step() function in Python:

https://www.geeksforgeeks.org/matplotlib-pyplot-step-function-in-python/

Python Seaborn Line Plot Tutorial: Create Data Visualizations:

https://www.datacamp.com/tutorial/python-seaborn-line-plot-tutorial

Choosing Colormaps in Matplotlib:

https://matplotlib.org/stable/tutorials/colors/colormaps.html

List of named colors in matplotlib:

https://matplotlib.org/stable/gallery/color/named_colors.html

Seaborn Styling, Color:

https://www.codecademy.com/article/seaborn-design-ii