Matplotlib - Exercise

```
import pandas as pd
import matplotlib.pyplot as plt


from google.colab import drive
import os

drive.mount('/content/drive')
os.chdir('/content/drive/MyDrive/')
for item in os.listdir():
  print(item)
print("--------------")
os.chdir('/content/drive/MyDrive/cloud/GitHub/AdvDataViz/Notebooks/')
for item in os.listdir():
  print(item)
print("--------------")
notebooks = "/content/drive/MyDrive/cloud/GitHub/AdvDataViz/Notebooks"
print(os.listdir(notebooks))
print("--------------")

file = "churn.csv"
file_path = os.path.join(notebooks, file)
with open(file_path, "r") as f:
  contents = f.read()
```

```
Mounted at /content/drive
learningStore
healthyCar
startup
Artificial Intelligence
cloud
--------------
03 Matplotlib  - Exercise.ipynb
02 Matplotlib.ipynb
01 Python_Pandas.ipynb
04 Continuous Variables - Histogram .ipynb
05 Continuous Variables - Histogram - Exercise .ipynb
07 Continuous Variables - Boxplot - Exercise .ipynb
03 Matplotlib - Exercise Solutions.ipynb
05 Continuous Variables - Histogram - Exercise Solutions.ipynb
06 Continuous Variables - Boxplot.ipynb
08 Continuous Variables - Scatterplot.ipynb
07 Continuous Variables - Boxplot - Exercise Solutions.ipynb
09 Continuous Variables - Scatterplot - Exercise Solutions.ipynb
09 Continuous Variables - Scatterplot - Exercise .ipynb
10 Categorical Variables - Bar_Pie.ipynb
12 Seaborn.ipynb
11 Pandas Data Visualization.ipynb
13 Seaborn - Exercise .ipynb
Top 50 US Tech Companies.csv
```

```
13 Seaborn - Exercise Solution.ipynb
15 Custom Modules.ipynb
14 Functions.ipynb
churn.csv
student_performance.csv
myplotlib.py
employee_attrition_.csv
heart-disease.csv
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['03 Matplotlib  - Exercise.ipynb', '02 Matplotlib.ipynb', '01 Python_Pandas.ipynb'
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```

Dataset: Customer Churn

```
#df = pd.read_csv("churn.csv")
df = pd.read_csv(file_path)

df.head()
```

	CreditScore	Gender	Age	Tenure	Balance	NumOfProducts	HasCrCard	IsActiveMembe
0	619	1	42	2	0.00	1	1	
1	608	1	41	1	83807.86	1	0	
2	502	1	42	8	159660.80	3	1	
3	699	1	39	1	0.00	2	0	
4	850	1	43	2	125510.82	1	1	

Next steps: Generate code with df | View recommended plots | New interactive sheet

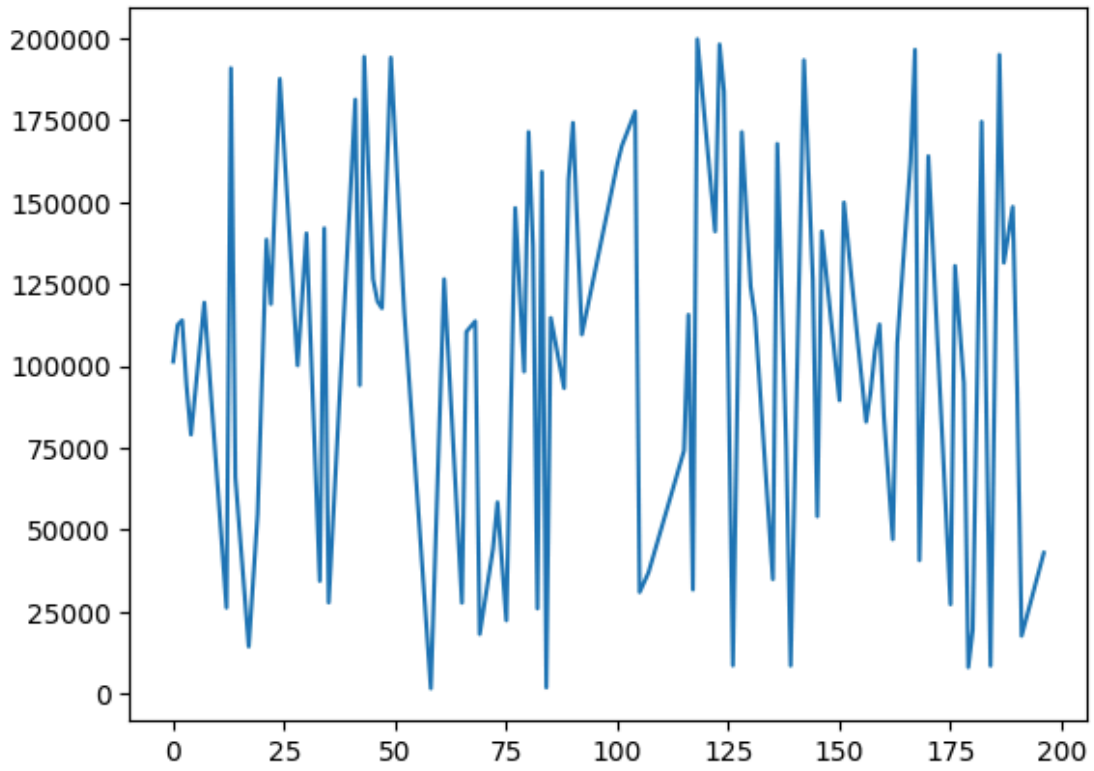
Use salaries for exercises

```
females_salary = df.loc[df["Gender"] == 0, "EstimatedSalary"][:100]
males_salary = df.loc[df["Gender"] == 1, "EstimatedSalary"][:100]
```

1.) Make a line plot of "males_salary".

```
fig, ax = plt.subplots()

ax.plot(males_salary);
```



2.) Create a figure with two axes stacked vertically. Set the figsize to (8, 4). In the top axis, display a line plot of "males_salary". Set the line color to "dodgerblue". In the bottom axis, display a line plot of "females_salary". Set the line color to "lightcoral" and the line style to "dashed".

```
fig, (top, bot) = plt.subplots(2, figsize=(8,4))

top.plot(males_salary, color="dodgerblue")
bot.plot(females_salary, color="lightcoral", linestyle="dashed");
```

3.) Create a figure with two axes set next to each other horizontally. Set the figsize to (15, 5). Recreate the plots from above. Place "males_salary" on the left and "females_salary" on the right.


```
fig, (left, right) = plt.subplots(1, 2, figsize=(15,5))

left.plot(males_salary, color="dodgerblue")
right.plot(females_salary, color="lightcoral", linestyle="dashed");
```