Activity 1: Create Customized Line plots.

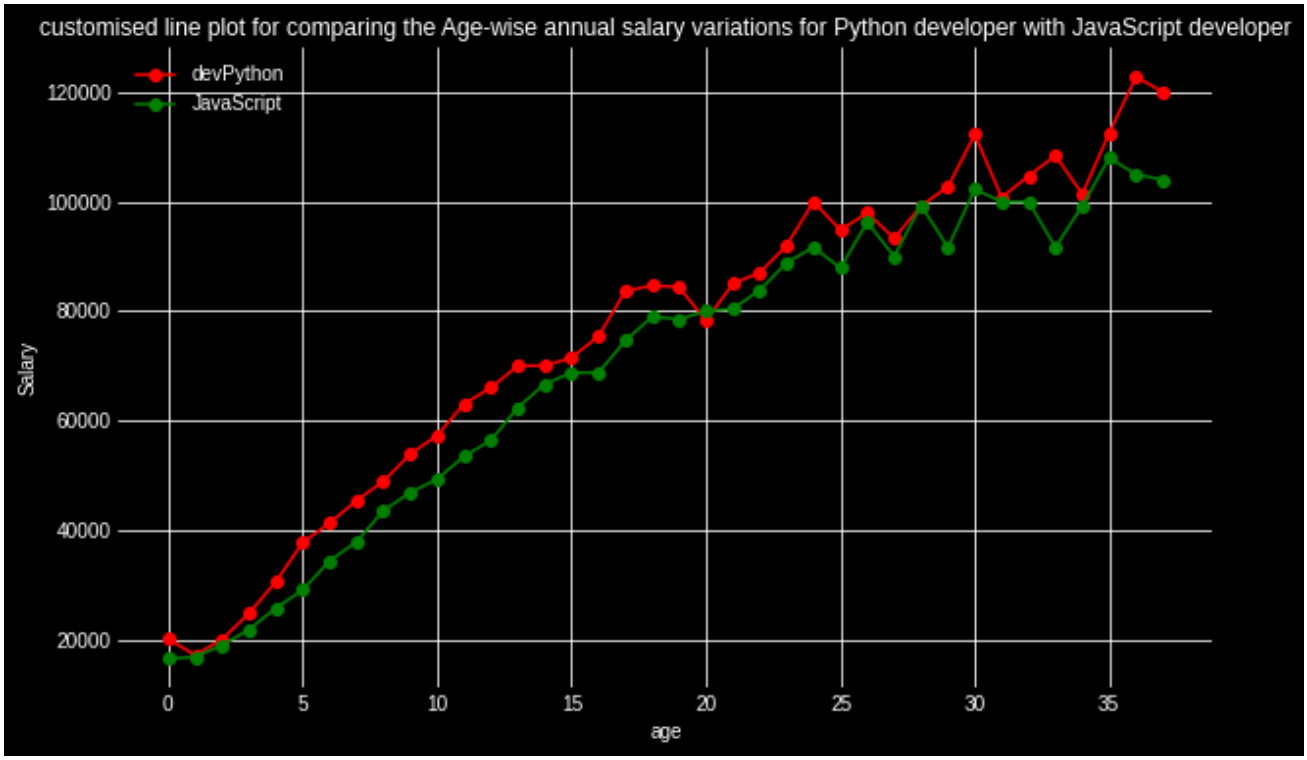
Given the dataset of the average annual salary (in dollars) of developers of various programming languages. Create customized line plots to compare the salary variations **Age-wise** for **Python** developer with **Javascript** developer.

Link to the Dataset:
https://raw.githubusercontent.com/CoreyMSchafer/code_snippets/master/Python/Matplotlib/10-Subplots/data.csv

```
# Step 1: Import necessary modules to create dataframe and line plots
import pandas as pd


# Step 2: Create a Dataframe and store it in a variable from the given dataset
df=pd.read_csv('https://raw.githubusercontent.com/CoreyMSchafer/code_snippets/master/Py


# Print the first 5 rows in the DataFrame
df.head()


```

	Age	All_Devs	Python	JavaScript
0	18	17784	20046	16446
1	19	16500	17100	16791
2	20	18012	20000	18942
3	21	20628	24744	21780
4	22	25206	30500	25704

```
# Step 3: Create a customised line plot for comparing the Age-wise annual salary variat
import pandas as pd
import matplotlib.pyplot as plt
plt.figure(figsize=(10,6))
plt.style.use('dark_background')
plt.title('customised line plot for comparing the Age-wise annual salary variations for
plt.plot(df['Python'],'r-o',label='devPython')
plt.plot(df['JavaScript'],'g-o',label='JavaScript')
plt.ylabel('Salary')
plt.xlabel('age')
plt.legend()
plt.grid()
plt.show()


```



Q: What can you conclude from the above comparison ?

A: Python Developer have more than salary than Javascript developer

Activity 2.1: Create a Pandas DataFrame

Create a Pandas DataFrame by using the below link which has the dataset of Tips taken on the total bill amount in restaurants in the CSV format:

Dataset Link : https://raw.githubusercontent.com/jiss-github123/tips/main/tips.csv

Also, print the first five rows of the dataset.

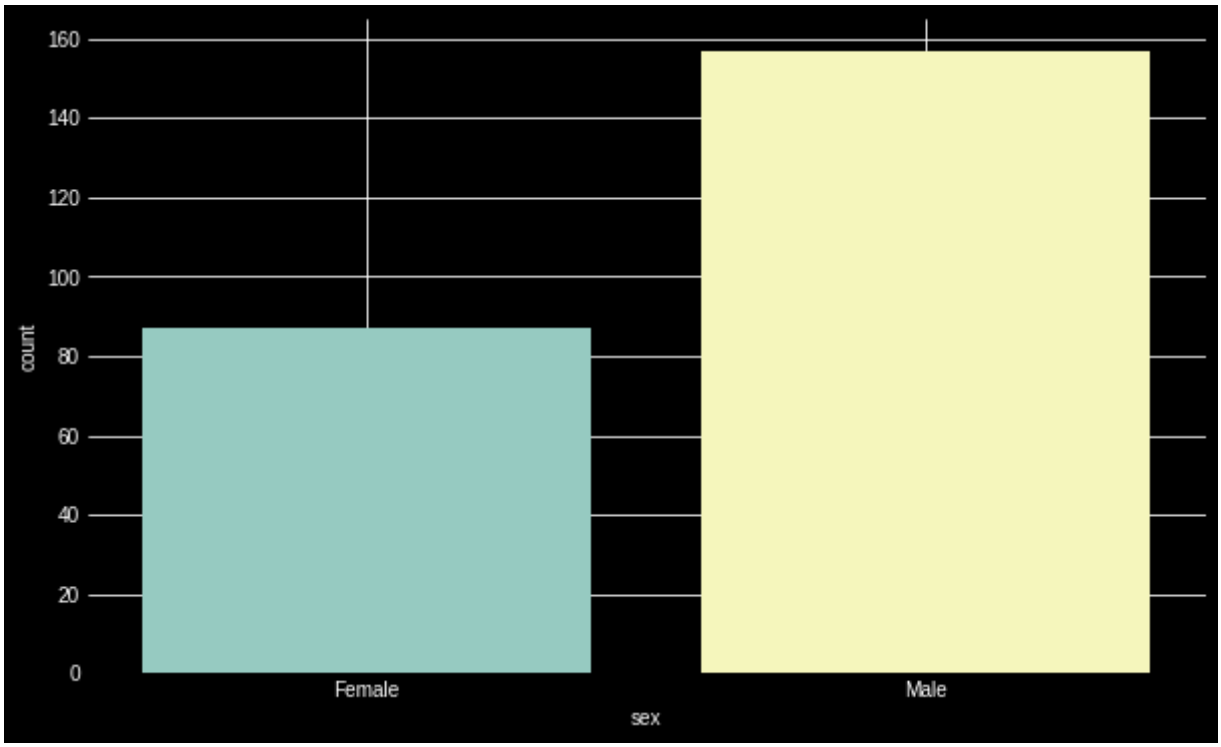
```
1 # Create a pandas DataFrame
2 import pandas as pd
3 df=pd.read_csv('https://raw.githubusercontent.com/jiss-github123/tips/main/tips.csv')
4 df.head()
5
```

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4

Activity 2.2: Create a Gender wise Count plot

Create a gender wise count plot by using the values in the `sex` column.

```
# Gender wise count plot for the 'sex' values in the 'tip_df' DataFrame on the x-axis.
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
plt.figure(figsize=(10,6))
sns.countplot(x='sex',data=df)
plt.grid()
plt.show()


```



So according to the above count plot, the number of `Female` is less than the number of `Male` in the dataset.

Q : Which gender is recorded more in the dataset ?

A :Male

Activity 3: Histogram using `hist()` Function

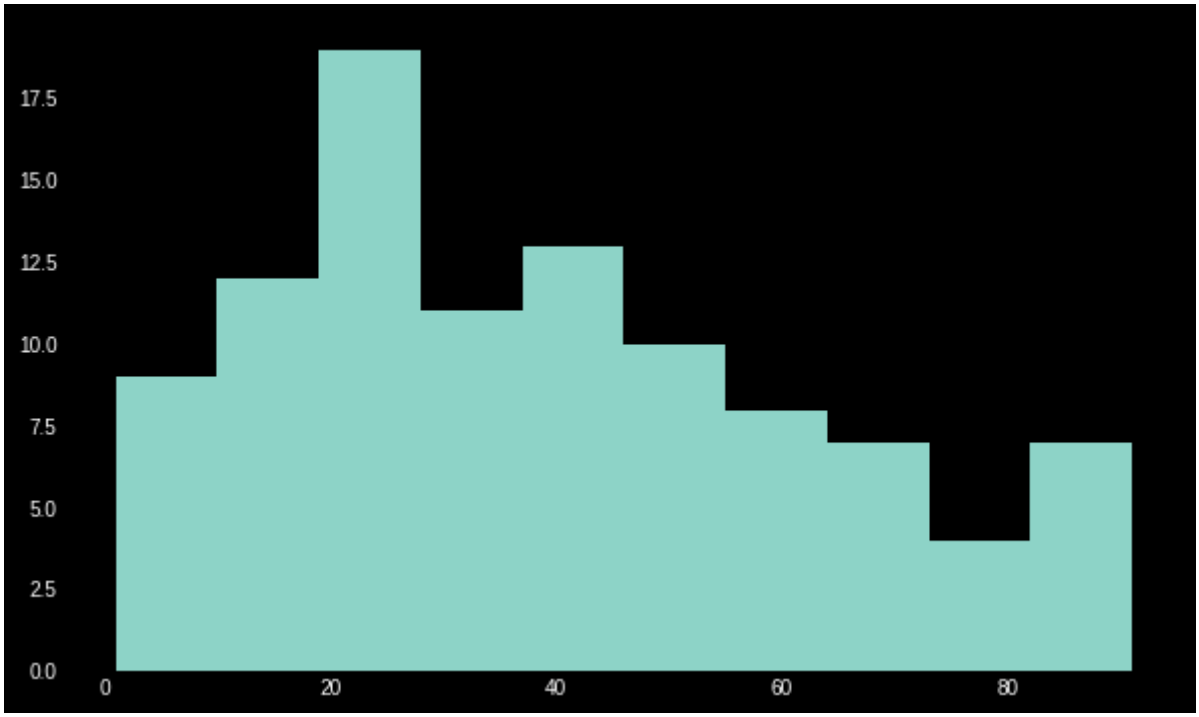
Given a list of random age of 100 individuals in a range between 1 and 91. Write a code to visualise the values in the list using a histogram.

```
age_list = [1,1,2,3,3,5,7,8,9,10,
     10,11,11,13,13,15,16,17,18,18,
     18,19,20,21,21,23,24,24,25,25,
     25,25,26,26,26,27,27,27,27,27,
     29,30,30,31,33,34,34,34,35,36,
     36,37,37,38,38,39,40,41,41,42,
     43,44,45,45,46,47,48,48,49,50,
     51,52,53,54,55,55,56,57,58,60,
     61,63,64,65,66,68,70,71,72,74,
     75,77,81,83,84,87,89,90,90,91
     ]
```

Steps to Follow:

1. Import the `matplotlib.pyplot` module.
2. Set the size of the plot using the `figsize` attribute of the `figure()` function.
3. Pass the `age_list` list inside the `hist()` function and set `bins = 10`.
4. Display the histogram using the `show()` function of the `matplotlib.pyplot` module.

```
1
2 # Import the 'matplotlib.pyplot' module.
3 import matplotlib.pyplot as plt
4 age_list = [1,1,2,3,3,5,7,8,9,10,
5      10,11,11,13,13,15,16,17,18,18,
6      18,19,20,21,21,23,24,24,25,25,
7      25,25,26,26,26,27,27,27,27,27,
8      29,30,30,31,33,34,34,34,35,36,
9      36,37,37,38,38,39,40,41,41,42,
10     43,44,45,45,46,47,48,48,49,50,
11     51,52,53,54,55,55,56,57,58,60,
12     61,63,64,65,66,68,70,71,72,74,
13     75,77,81,83,84,87,89,90,90,91
14     ]
15
16
17
18 # Set the size of the plot using the 'figsize' attribute of the 'figure()' function.
19 plt.figure(figsize=(10,6))
20
21
22 # Pass the 'age_list' list inside the 'hist()' function and set 'bins = 10'.
23 plt.hist(age_list,bins=10)
24
25
26 # Display the histogram using the 'show()' function of the 'matplotlib.pyplot' module.
27 plt.show()
28
```


17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
0
20
40
60
80