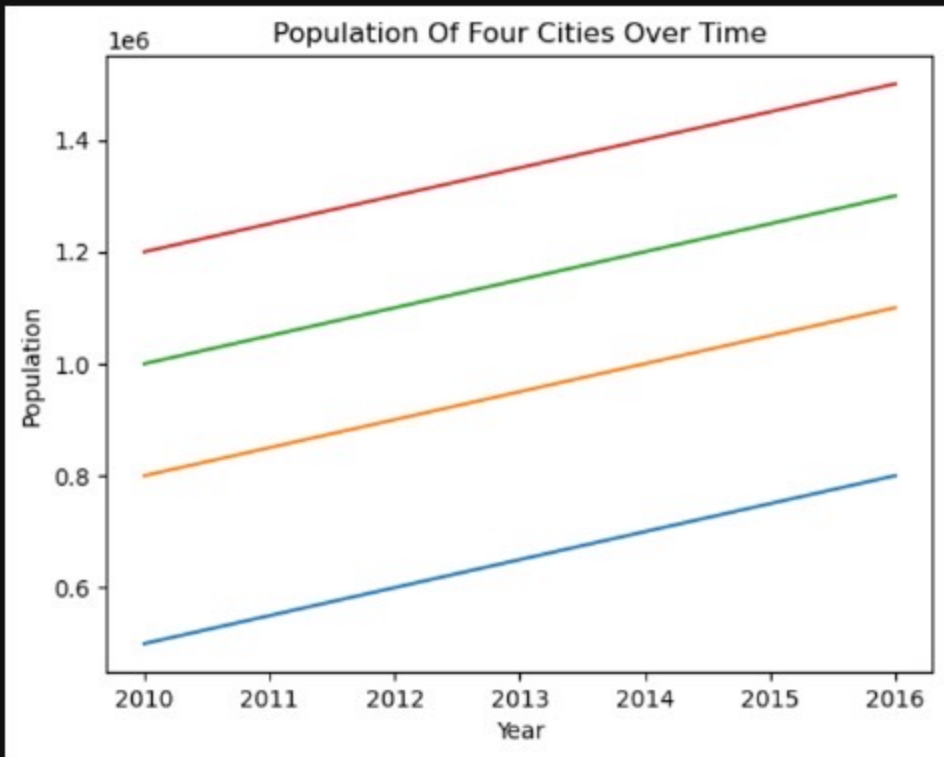
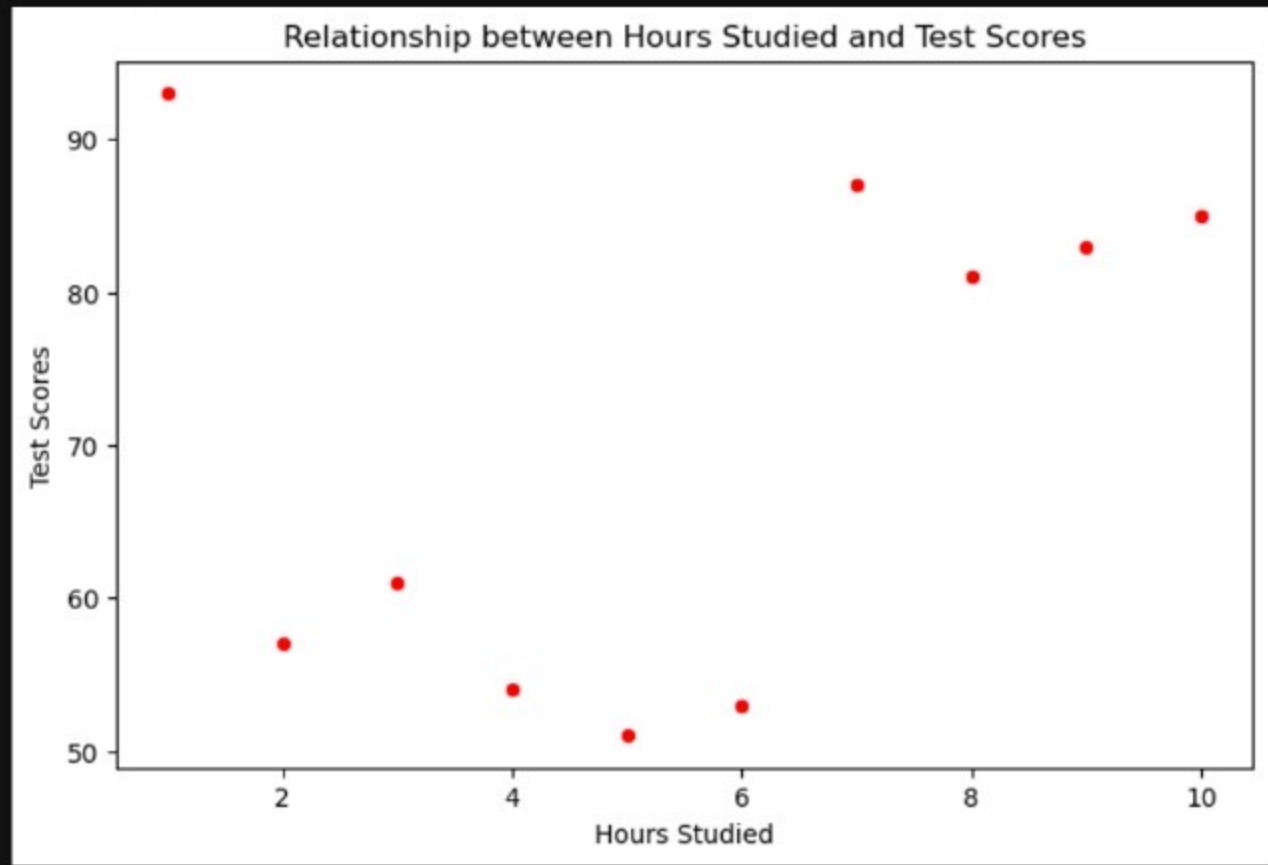


```
#Add Legend
plt.legend

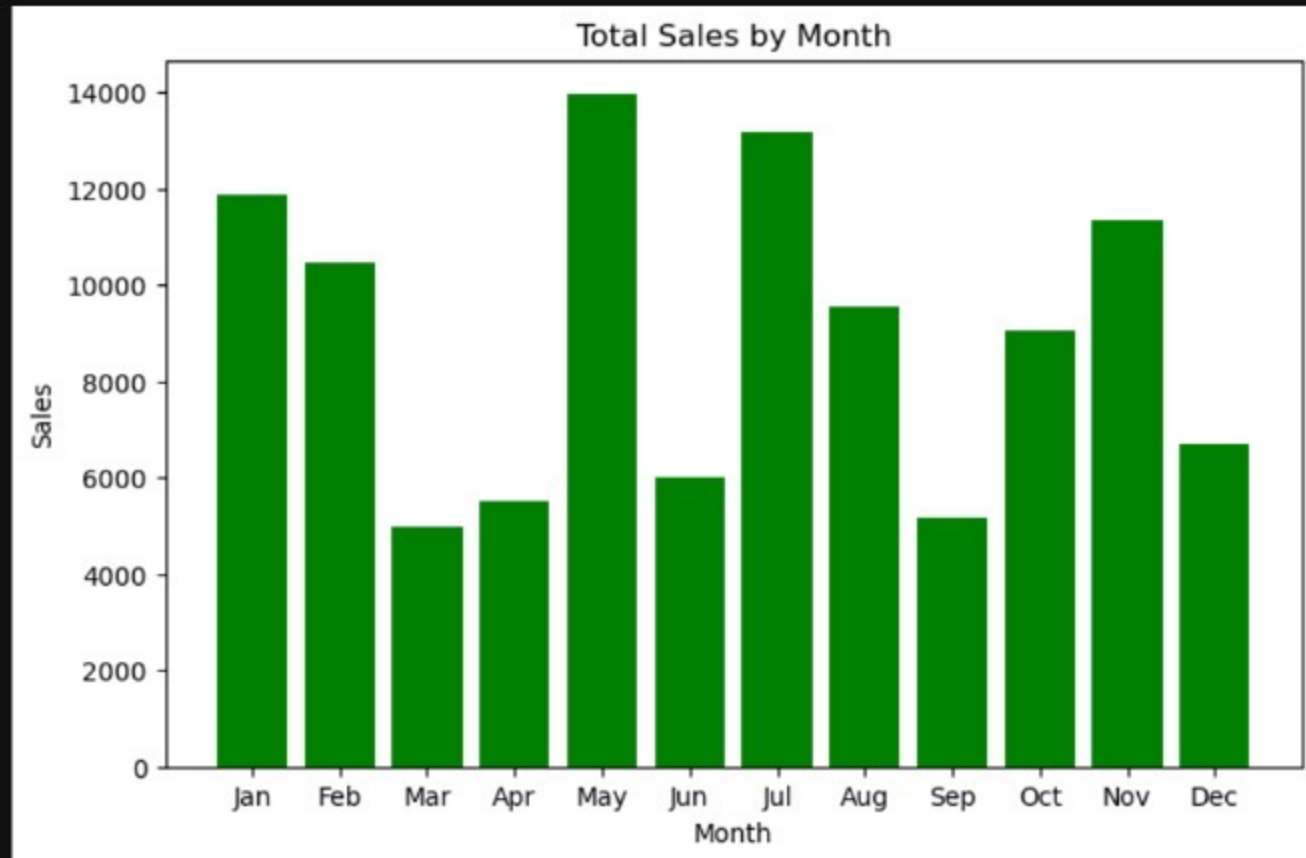
#Show the plot
plt.show()
```



```
plt.xlabel("Hours Studied")  
plt.ylabel("Test Scores")  
  
#Show the plot  
plt.show()
```



```
#Show the plot  
plt.show()
```





```
[ ]: #Exercise1

[ ]: #Create a line plot using matplotlib pyplot that displays the population of four different cities over time.

[ ]: #Each city should have its own line, and the x-axis should represent years.

[12]: import matplotlib.pyplot as plt

#Data for the four cities
years=[2010,2011,2012,2013,2014,2015,2016]
city_a= [500000, 550000, 600000, 650000, 700000, 750000, 800000]
city_b= [800000, 850000, 900000, 950000, 1000000, 1050000, 1100000]
city_c= [1000000, 1050000, 1100000, 1150000, 1200000, 1250000, 1300000]
city_d= [1200000, 1250000, 1300000, 1350000, 1400000, 1450000, 1500000]

#Create a line plot
plt.plot(years ,city_a , label="City A")
plt.plot(years ,city_b , label="City B")
plt.plot(years ,city_c , label="City C")
plt.plot(years ,city_d , label="City D")

#Add title and labels
plt.title("Population Of Four Cities Over Time")
plt.xlabel("Year")
plt.ylabel("Population")

#Add legend
plt.legend

#Show the plot
plt.show()
```





```
[ ]: #Exercise2

[ ]: #Create a scatter plot using seaborn that shows the relationship between the number of hours studied

[ ]: #and the test scores obtained by a group of students

[26]: import matplotlib.pyplot as plt
import seaborn as sns

#Data for Scatter Plot
Hours_Studied=[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Test_Scores=[93, 57, 61, 54, 51, 53, 87, 81, 83, 85]

#Create a scatter plot
plt.figure(figsize=(8,5))
sns.scatterplot(x=Hours_Studied , y=Test_Scores , color="red")

#Add titles and Labels
plt.title("Relationship between Hours Studied and Test Scores")
plt.xlabel("Hours Studied")
plt.ylabel("Test Scores")

#Show the plot
plt.show()
```



Relationship between Hours Studied and Test Scores



# jupyter Assignment Last Checkpoint: 6 minutes ago

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Code

JupyterLab Python 3 (ipykernel)

```
[ ]: #Exercise3

[ ]: #Create a bar chart using matplotlib pyplot that shows the total sales for each month of the year.

[7]: import matplotlib.pyplot as plt

#Data for bar chart
Months=["Jan", "Feb", "Mar", "Apr", "May", "Jun", "Jul", "Aug", "Sep", "Oct", "Nov", "Dec"]
Sales= [11860, 10480, 4997, 5523, 13965, 6011, 13158, 9533, 5158, 9058, 11346, 6675]
#create a bar chart
plt.figure(figsize=(8, 5))
plt.bar(Months,Sales,color="green")

#Add title and Labels
plt.title("Total Sales by Month")
plt.xlabel("Month")
plt.ylabel("Sales")

#Show the plot
plt.show()
```

