

How can I plot multiple series from a Pandas DataFrame?

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Pandas is a popular Python library for data manipulation and analysis. One of its useful features is the ability to plot multiple series from a DataFrame. This allows for easy visualization and comparison of data within a single graph. To do this, you can use the built-in "plot" function and specify the columns or series you want to plot. You can also customize the graph by adding labels, titles, and changing the plot type. This feature is particularly helpful for analyzing complex datasets and identifying patterns or trends. With Pandas, plotting multiple series from a DataFrame is a straightforward and efficient process, making it a valuable tool for data analysis.

Plot Multiple Series from a Pandas DataFrame

You can use the following syntax to plot multiple series from a single pandas DataFrame:

```
plt.plot(df)
```

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plt.plot(df)
```

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plt.plot(df)
```

The following step-by-step example shows how to use this syntax in practice.

Step 1: Create the Data

First, let's create a pandas DataFrame that contains the total sales made by three companies during an 8-week period:

```
import pandas as pd
```

```
#create data
```

```
df = pd.DataFrame({'A': ,  
'B': ,  
'C': })  
#view data  
print(df)
```

```
A B C  
0 9 5 5  
1 12 7 4  
2 15 7 7  
3 14 9 13  
4 19 12 15  
5 23 9 15  
6 25 9 18  
7 29 14 31
```

Step 2: Plot Multiple Series

Next, let's plot the sales of each company on the same chart:

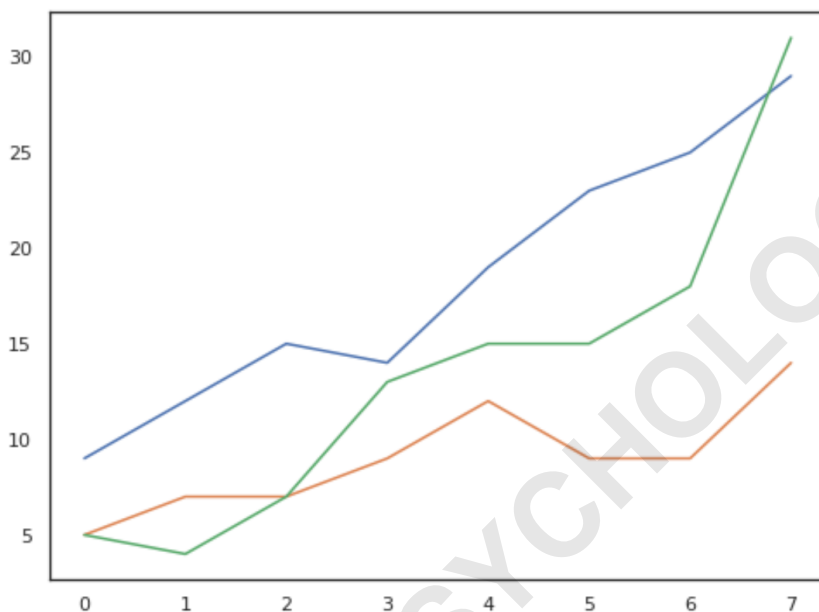
```
import matplotlib.pyplot as plt  
  
#plot each series  
plt.plot(df)
```

```
plt.plot(df)
```

```
plt.plot(df)
```

```
#display plot
```

```
plt.show()
```



Step 3: Add a Legend and Labels

Next, let's add a legend and some axes labels to make the plot easier to read:

```
#plot individual lines with custom colors and labels
```

```
plt.plot(df, label='A', color='green')
```

```
plt.plot(df, label='B', color='steelblue')
```

```
plt.plot(df, label='C', color='purple')
```

```
#add legend
```

```
plt.legend(title='Group')
```

```
#add axes labels and a title
```

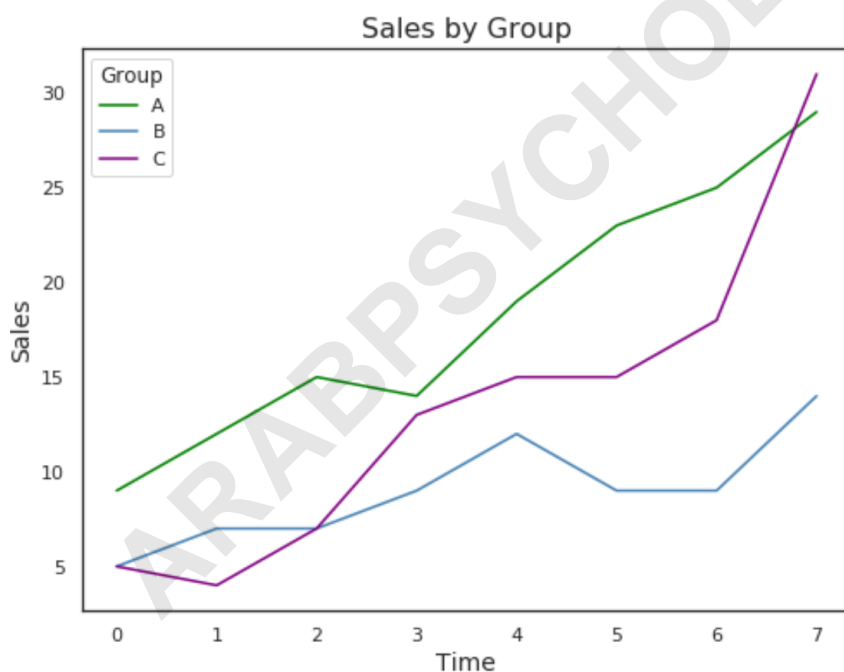
```
plt.ylabel('Sales', fontsize=14)
```

```
plt.xlabel('Time', fontsize=14)
```

```
plt.title('Sales by Group', fontsize=16)
```

```
#display plot
```

```
plt.show()
```



You can find more pandas tutorials on .