

```
In [1]: import warnings
warnings.filterwarnings('ignore', category=FutureWarning)
```

```
In [2]: import pandas as pd
```

```
In [3]: import matplotlib.pyplot as plt # visulization
import seaborn as sns # static visulization
```

```
In [4]: sns.get_dataset_names()
```

```
Out[4]: ['anagrams',
        'anscombe',
        'attention',
        'brain_networks',
        'car_crashes',
        'diamonds',
        'dots',
        'dowjones',
        'exercise',
        'flights',
        'fmri',
        'geyser',
        'glue',
        'healthexp',
        'iris',
        'mpg',
        'penguins',
        'planets',
        'seaice',
        'taxis',
        'tips',
        'titanic']
```

```
In [5]: tips = sns.load_dataset("tips")
tips.head()
```


```
Out[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

```
In [6]: titanic = sns.load_dataset("titanic")
titanic.head()
```

Out[6]:


	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult
0	0	3	male	22.0	1	0	7.2500	S	Third	man	
1	1	1	female	38.0	1	0	71.2833	C	First	woman	
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	
3	1	1	female	35.0	1	0	53.1000	S	First	woman	
4	0	3	male	35.0	0	0	8.0500	S	Third	man	



In [7]: `taxis = sns.load_dataset("taxis")`  
`taxis.head()`

Out[7]:

	pickup	dropoff	passengers	distance	fare	tip	tolls	total	color	payment	pi
0	2019-03-23 20:21:09	2019-03-23 20:27:24	1	1.60	7.0	2.15	0.0	12.95	yellow	credit card	
1	2019-03-04 16:11:55	2019-03-04 16:19:00	1	0.79	5.0	0.00	0.0	9.30	yellow	cash	
2	2019-03-27 17:53:01	2019-03-27 18:00:25	1	1.37	7.5	2.36	0.0	14.16	yellow	credit card	
3	2019-03-10 01:23:59	2019-03-10 01:49:51	1	7.70	27.0	6.15	0.0	36.95	yellow	credit card	
4	2019-03-30 13:27:42	2019-03-30 13:37:14	3	2.16	9.0	1.10	0.0	13.40	yellow	credit card	



In [8]: `tips`

```
Out[8]:
```

	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
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

244 rows × 7 columns

```
In [9]: sns.set_theme(style="darkgrid")
```

```
In [10]: tips
```

```
Out[10]:
```

	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
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

244 rows × 7 columns

```
In [11]: tips.to_csv("tips_dataset.csv", index=False)
```

```
In [12]: import os
os.getcwd()
```

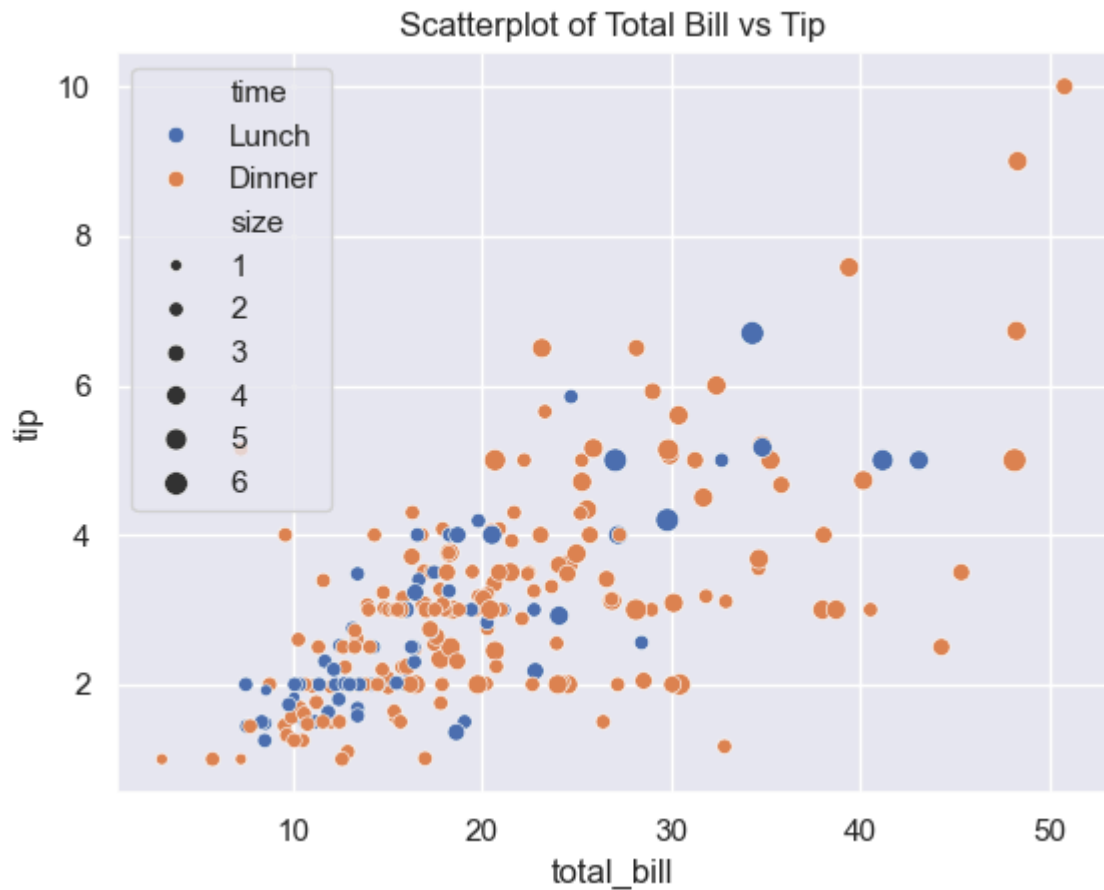
```
Out[12]: 'C:\\Users\\HAI\\anaconda3'
```

```
In [13]: plt.figure(figsize=(8, 6))
```

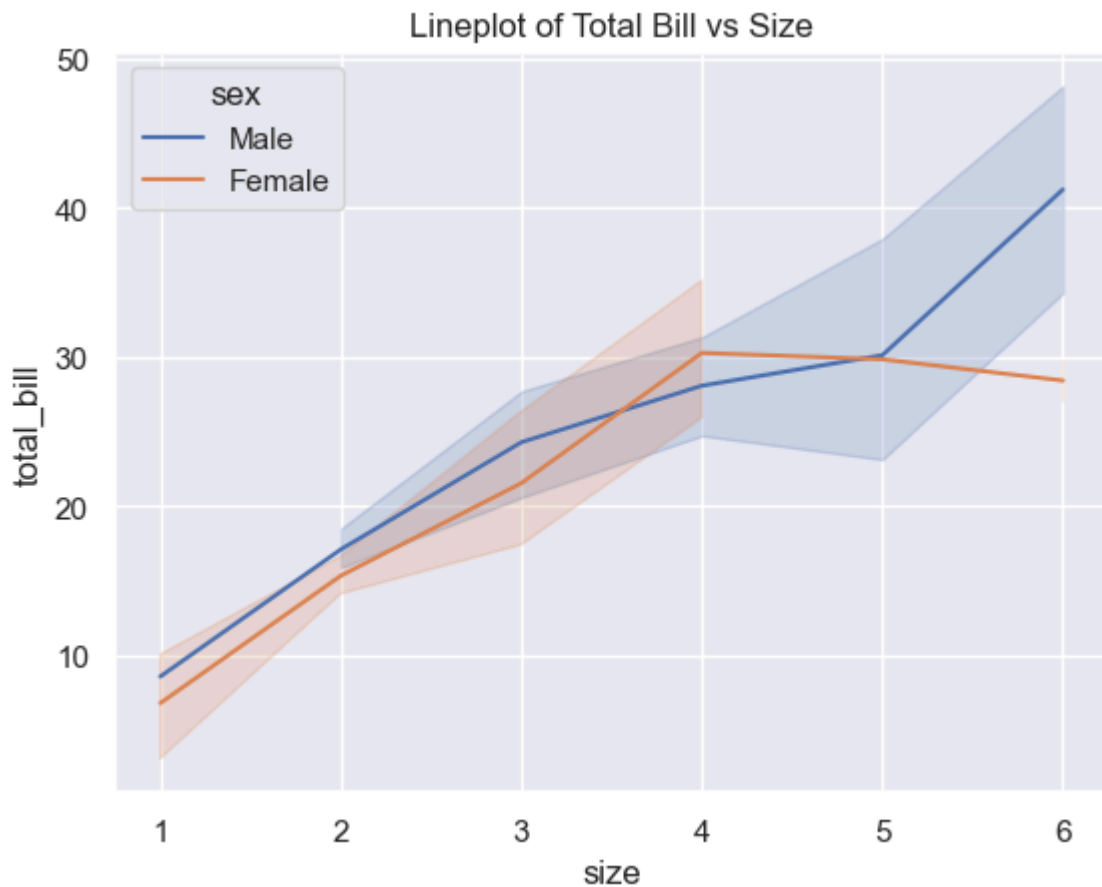
```
Out[13]: <Figure size 800x600 with 0 Axes>
```

```
<Figure size 800x600 with 0 Axes>
```

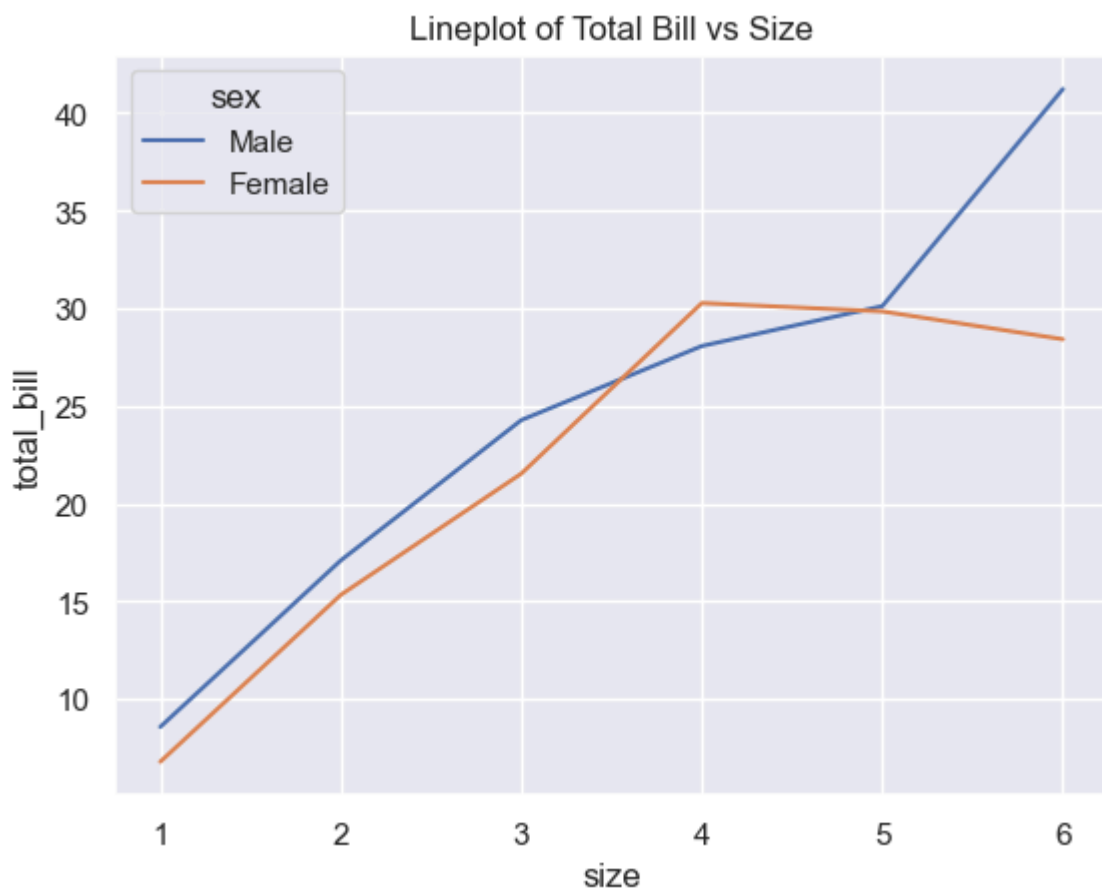
```
In [14]: sns.scatterplot(data=tips, x="total_bill", y="tip", hue="time", size="size", palette="magma",  
plt.title("Scatterplot of Total Bill vs Tip")  
plt.show())
```



```
In [15]: # line plot  
sns.lineplot(data=tips, x="size", y="total_bill", hue="sex", markers="o")  
plt.title("Lineplot of Total Bill vs Size")  
plt.show()
```



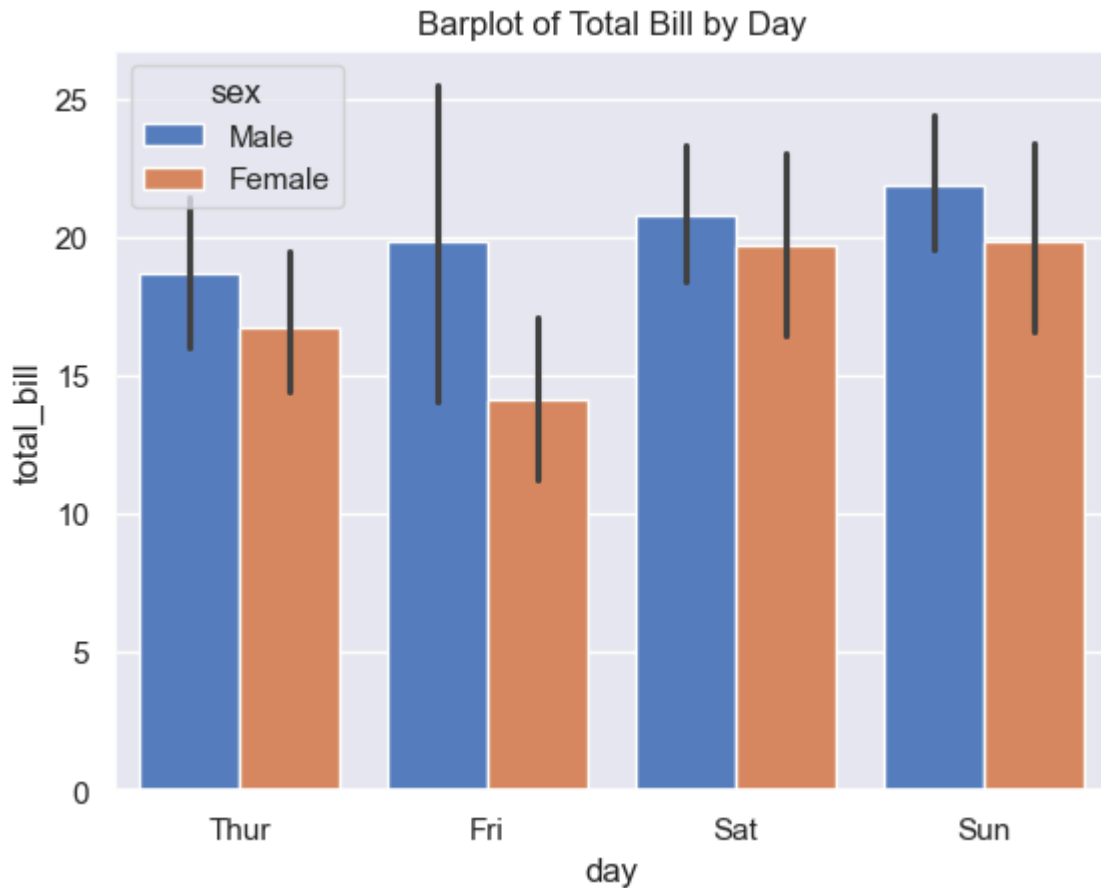
```
In [16]: # line plot
sns.lineplot(data=tips, x="size", y="total_bill", hue="sex", ci=None, markers="o")
plt.title("Lineplot of Total Bill vs Size")
plt.show()
```



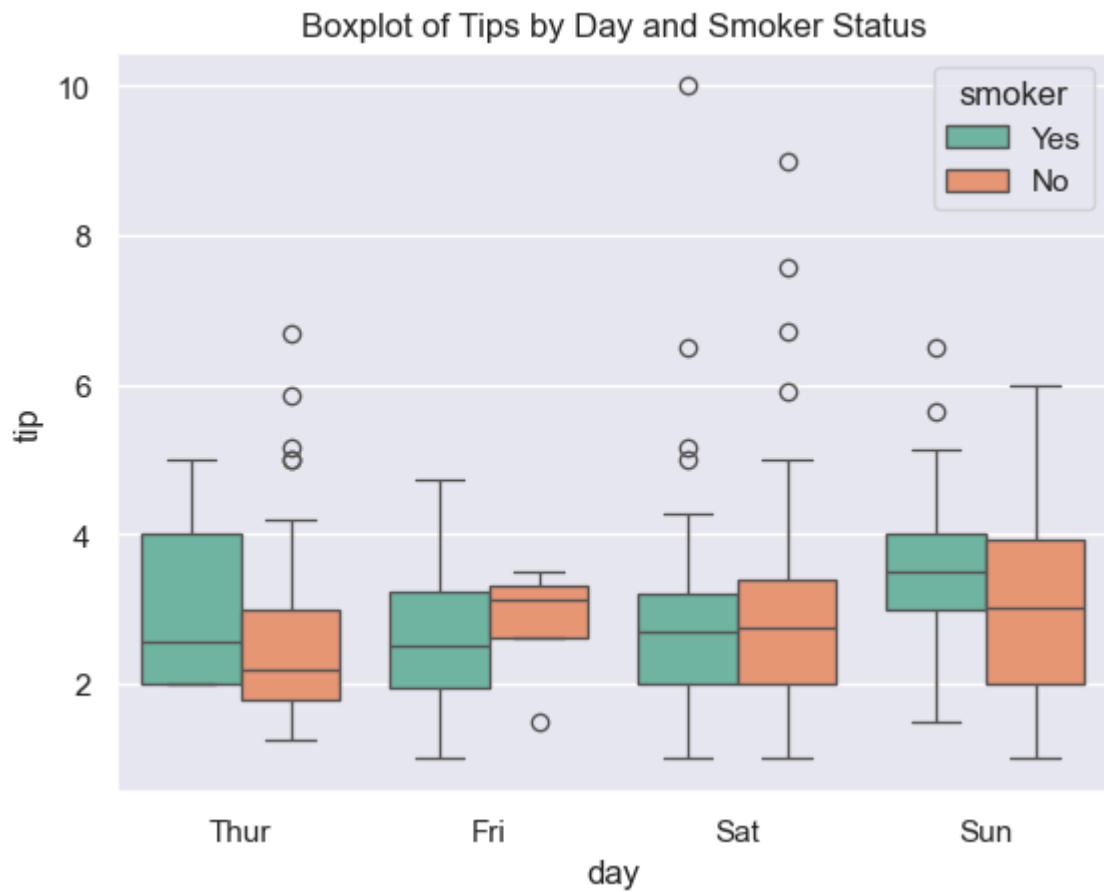
```
In [17]: tips.columns
```

```
Out[17]: Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='object')
```

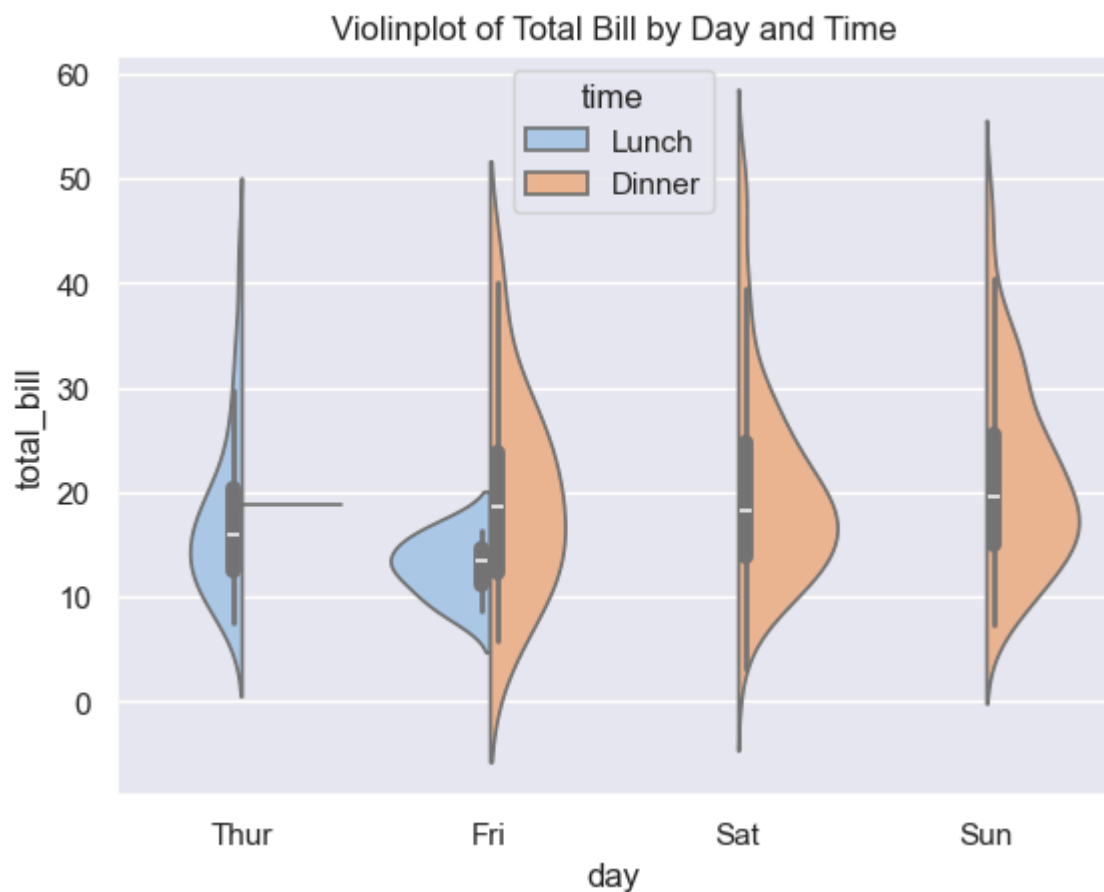
```
In [18]: # Bar plot
sns.barplot(data=tips, x="day", y="total_bill", hue="sex", palette="muted")
plt.title("Barplot of Total Bill by Day")
plt.show()
```



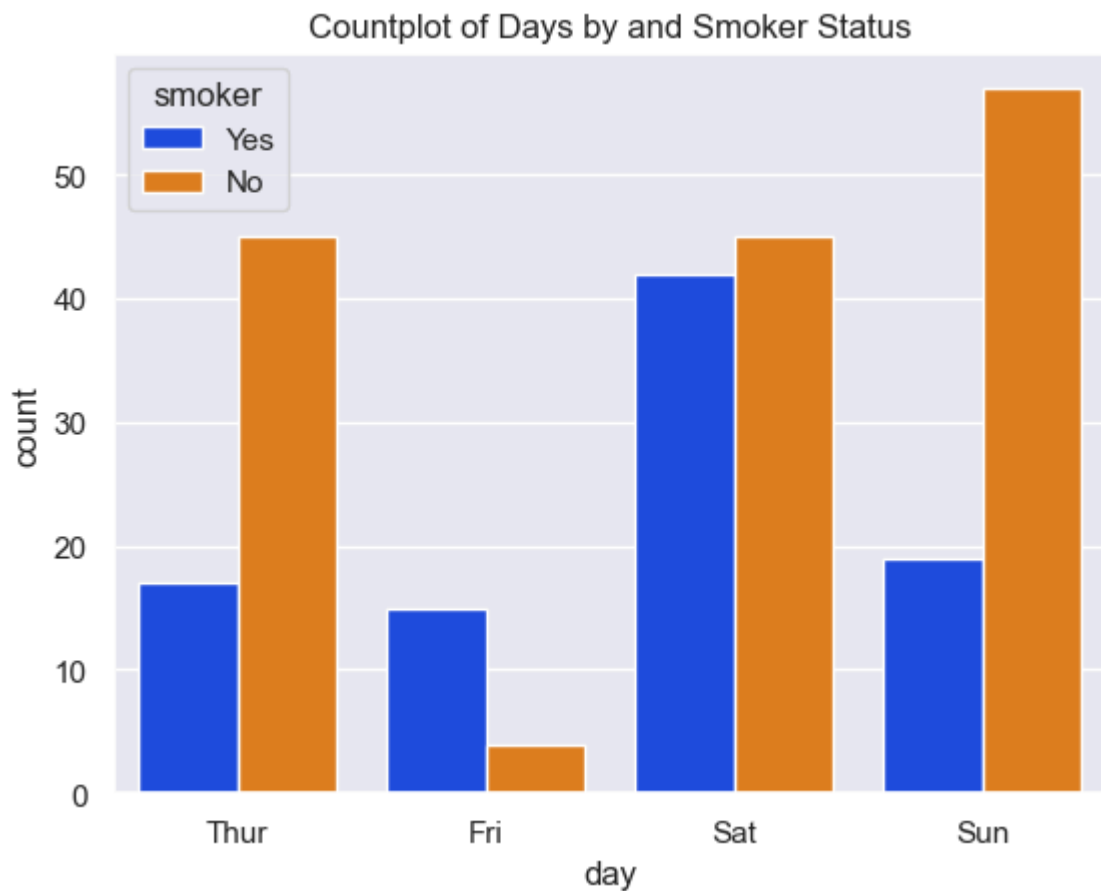
```
In [19]: # Box Plot
sns.boxplot(data=tips, x="day", y="tip", hue="smoker", palette="Set2")
plt.title("Boxplot of Tips by Day and Smoker Status")
plt.show()
```



```
In [20]: # Violin Plot
sns.violinplot(data=tips, x="day", y="total_bill", hue="time", split=True, palette
plt.title("Violinplot of Total Bill by Day and Time")
plt.show()
```

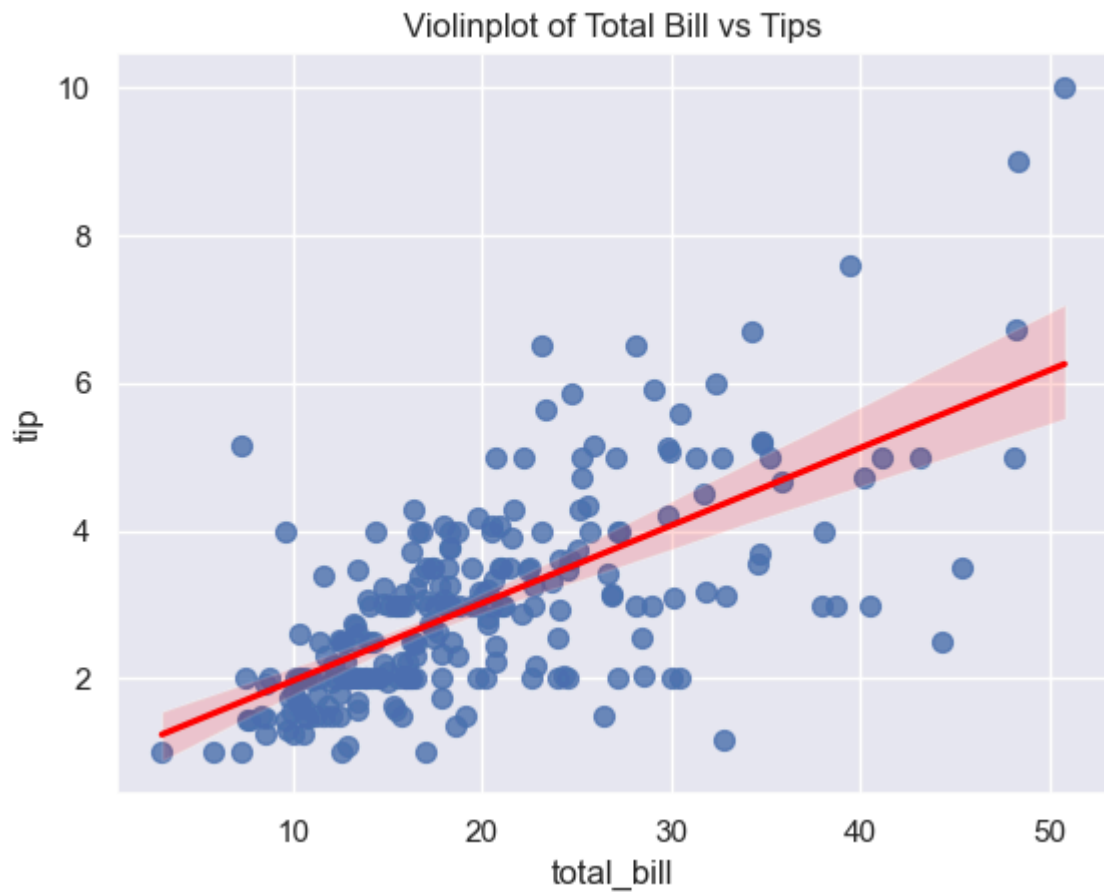


```
In [21]: # Count Plot
sns.countplot(data=tips, x="day", hue="smoker", palette="bright")
plt.title("Countplot of Days by and Smoker Status")
plt.show()
```

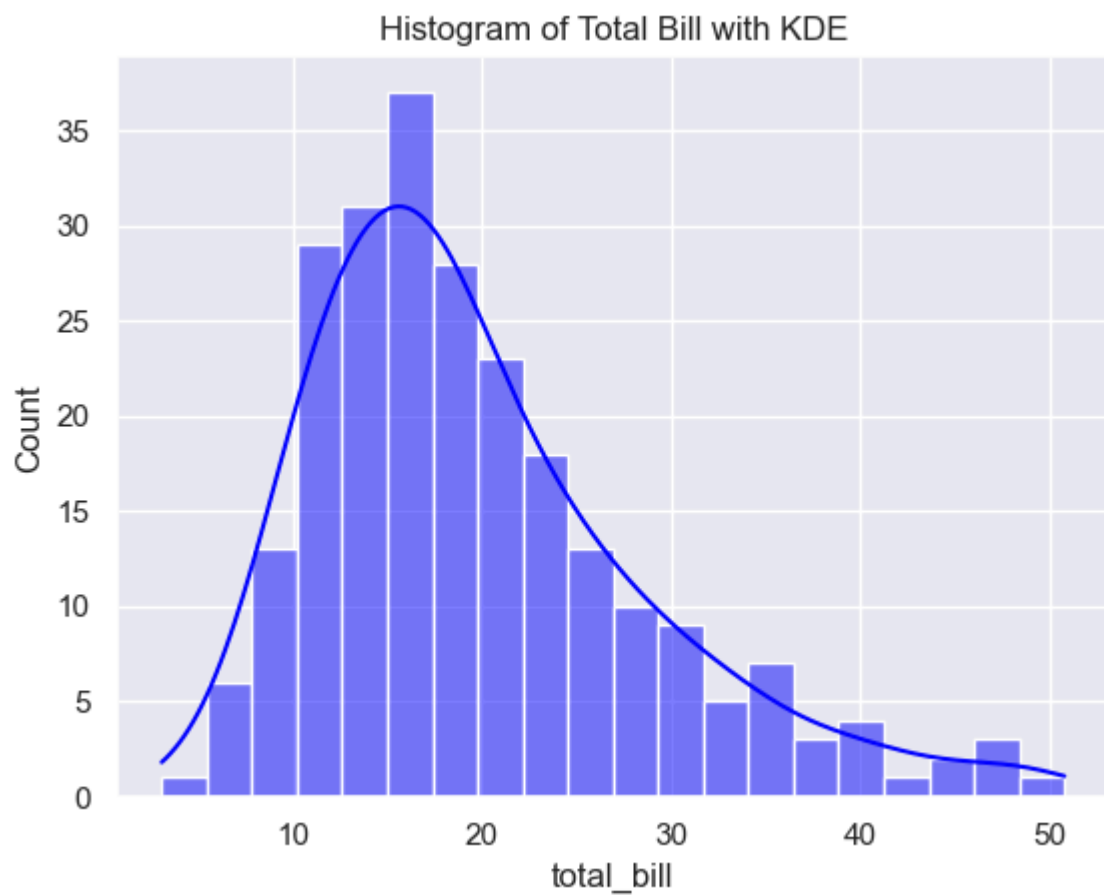


```
In [22]: # regression plot
sns.regplot(data=tips, x="total_bill", y="tip", scatter_kws={'s':50}, line_kws={'co
plt.title("Violinplot of Total Bill vs Tips")
plt.show()
```

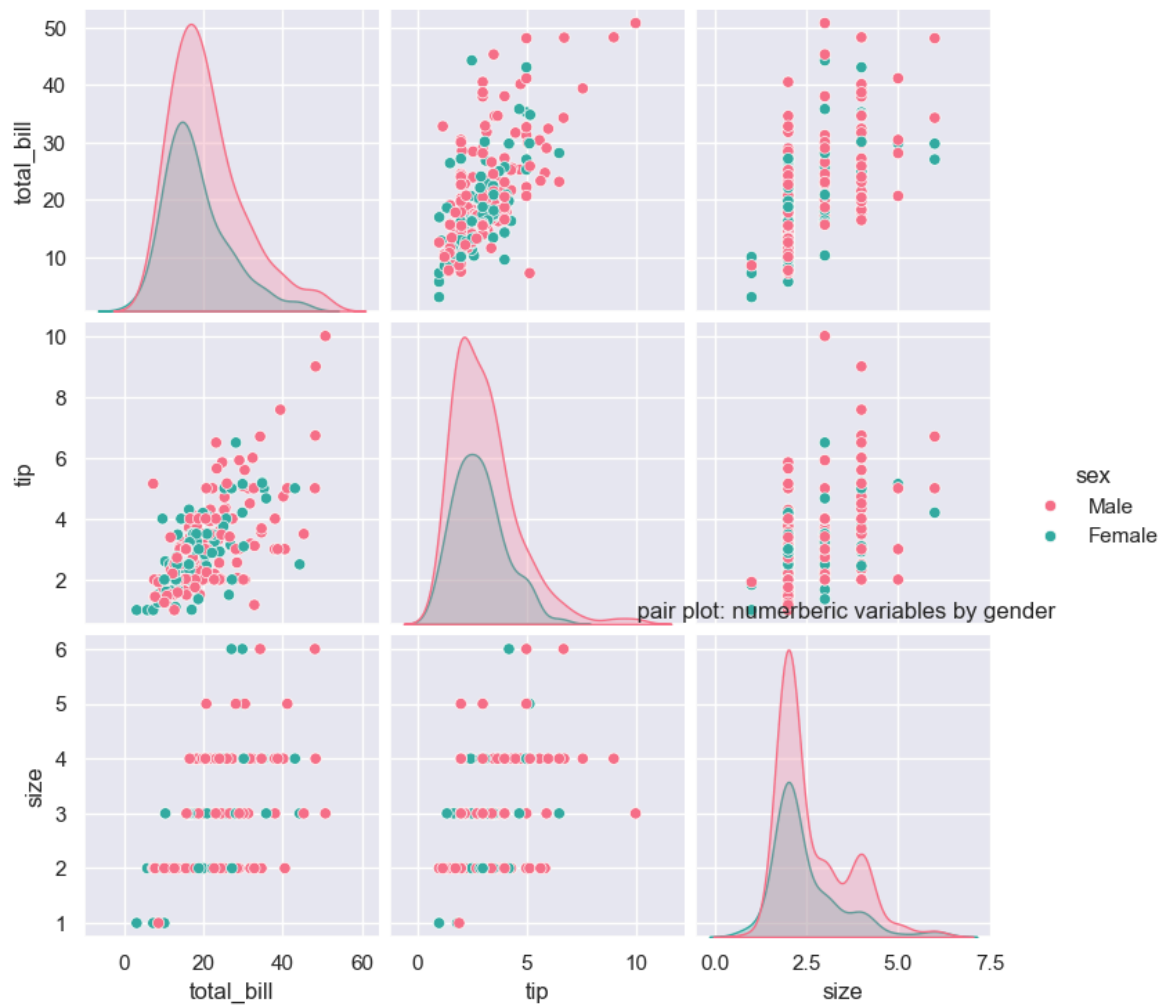




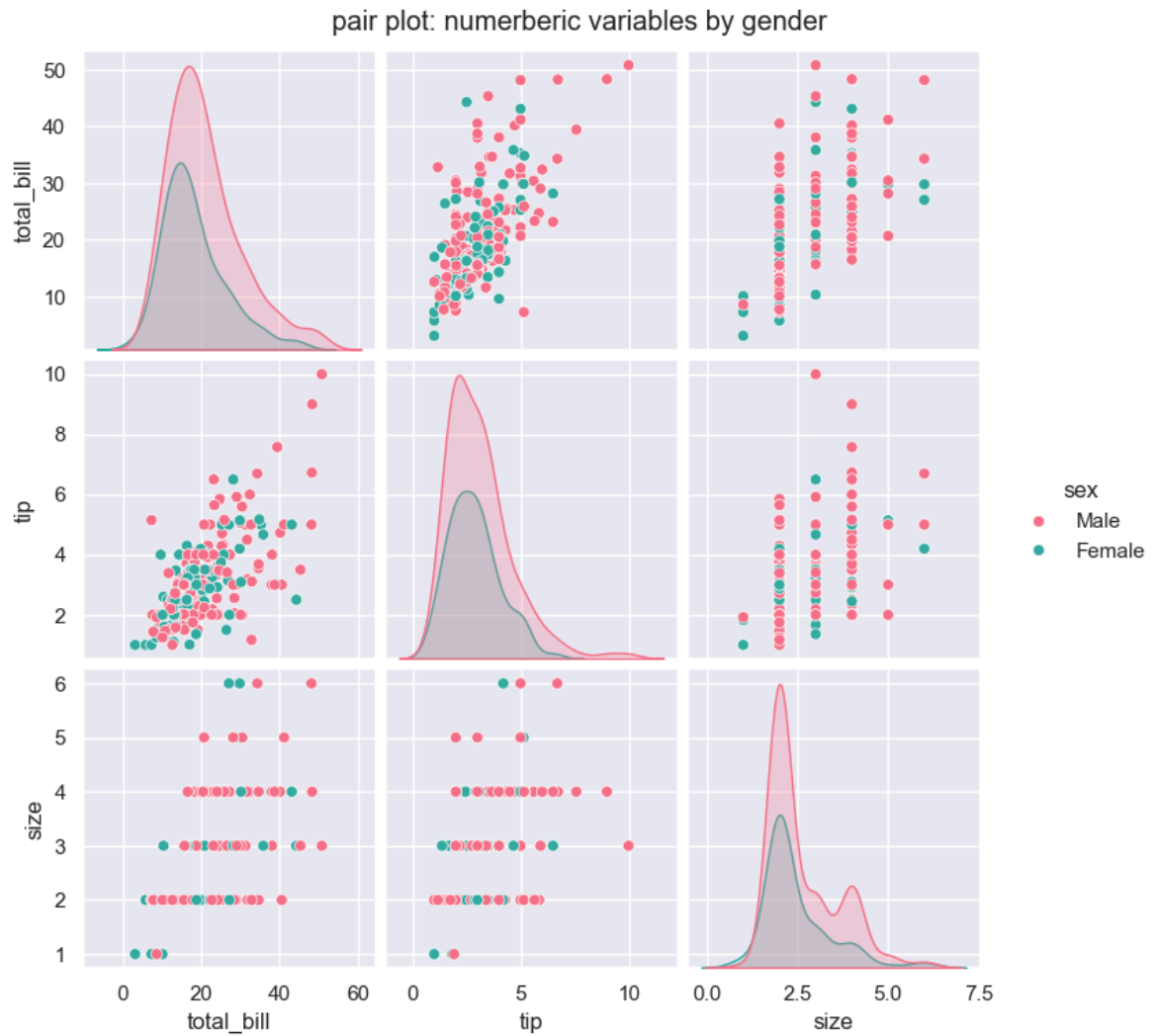
```
In [23]: # histogram of total bill with kde
sns.histplot(data=tips, x='total_bill', bins=20, kde=True, color='blue')
plt.title("Histogram of Total Bill with KDE")
plt.show()
```



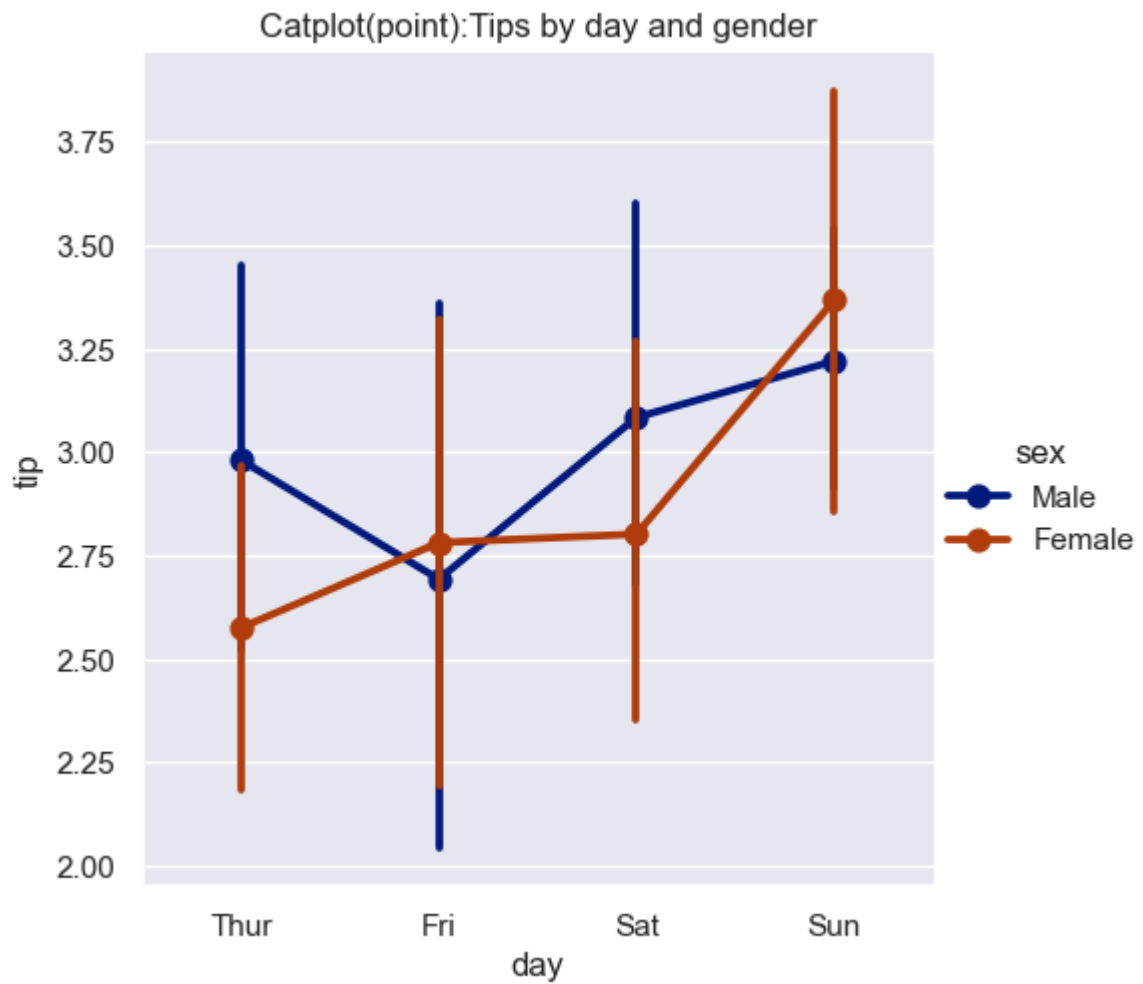
```
In [24]: # pairplot
sns.pairplot(data=tips, hue='sex', vars=["total_bill", "tip", "size"], palette='husl')
plt.title(" pair plot: numerberic variables by gender", y=1.02)
plt.show()
```



```
In [25]: # pairplot
sns.pairplot(data=tips, hue='sex', vars=["total_bill", "tip", "size"], palette='husl')
plt.suptitle(" pair plot: numerberic variables by gender", y=1.02)
plt.show()
```

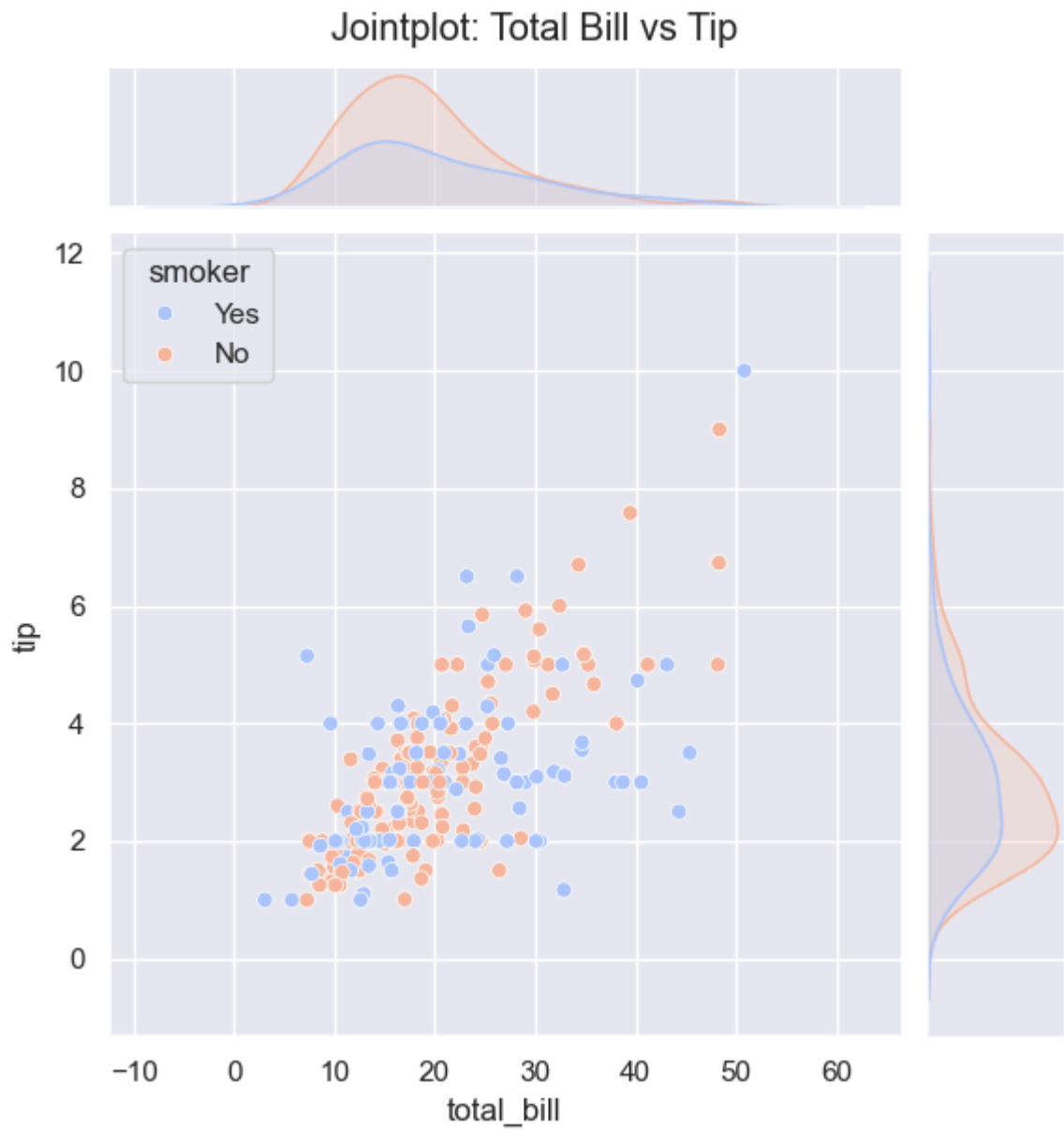


```
In [26]: # cat plot
sns.catplot(data=tips, x='day', y='tip', hue='sex', kind='point', palette='dark')
plt.title('Catplot(point):Tips by day and gender')
plt.show()
```

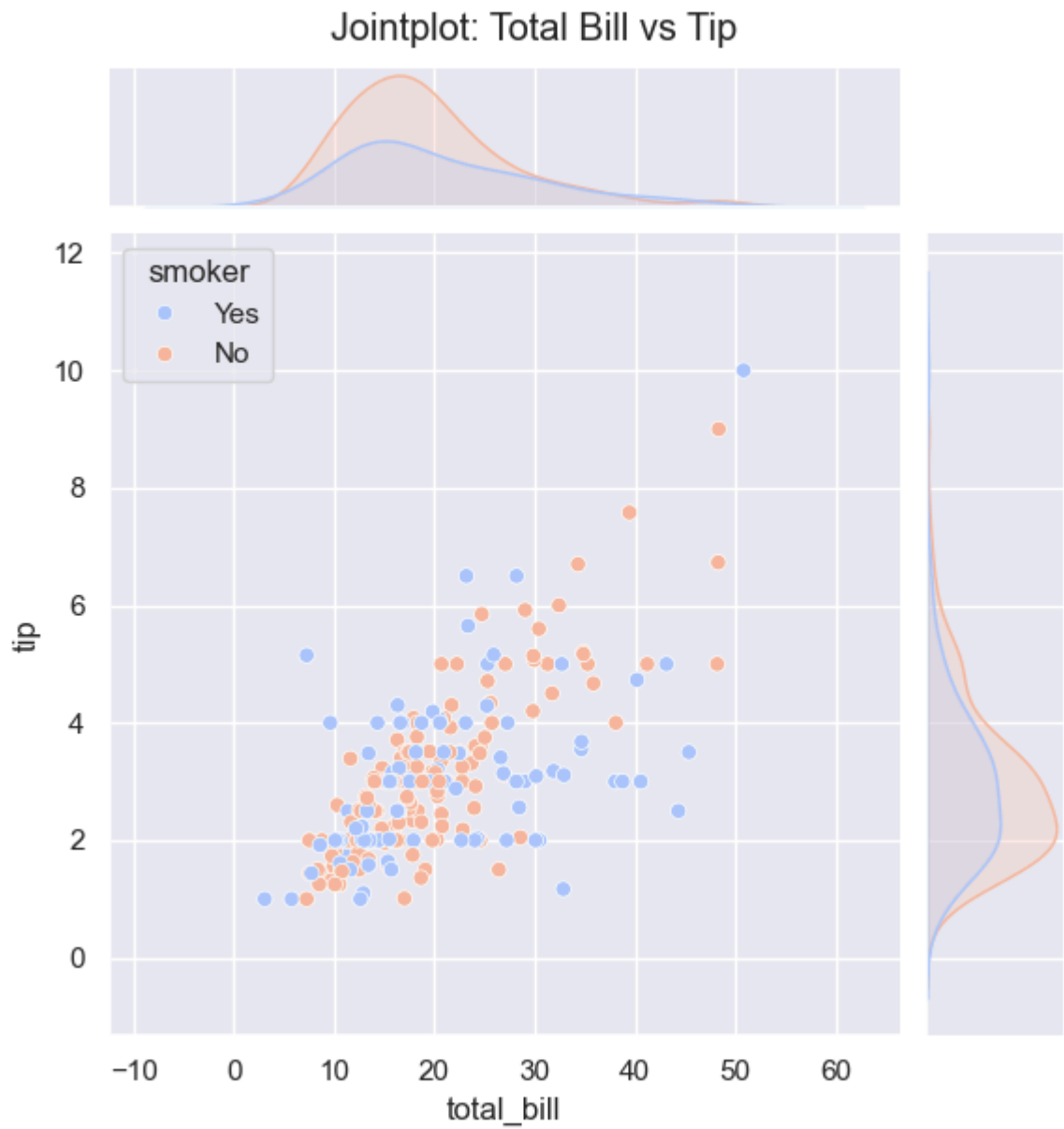


```
In [27]: # jointplot

sns.jointplot(data=tips, x='total_bill', y='tip', kind='scatter', hue='smoker',
plt.suptitle("Jointplot: Total Bill vs Tip", y=1.02)
plt.show()
```

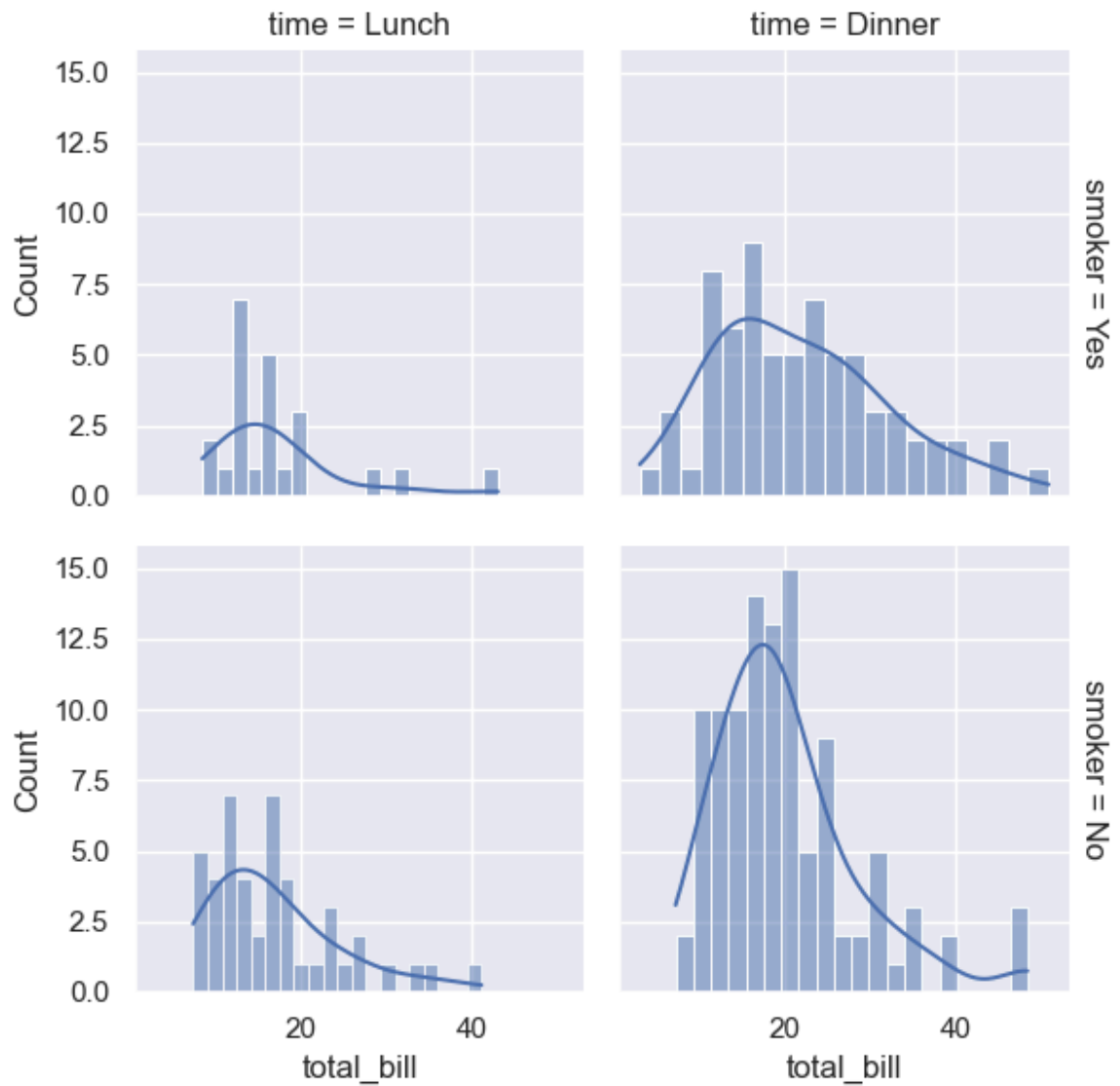


```
In [28]: #jointplot
sns.jointplot(data=tips, x='total_bill', y='tip', kind='scatter', hue='smoker',
plt.suptitle("Jointplot: Total Bill vs Tip", y=1.02)
plt.show()
```

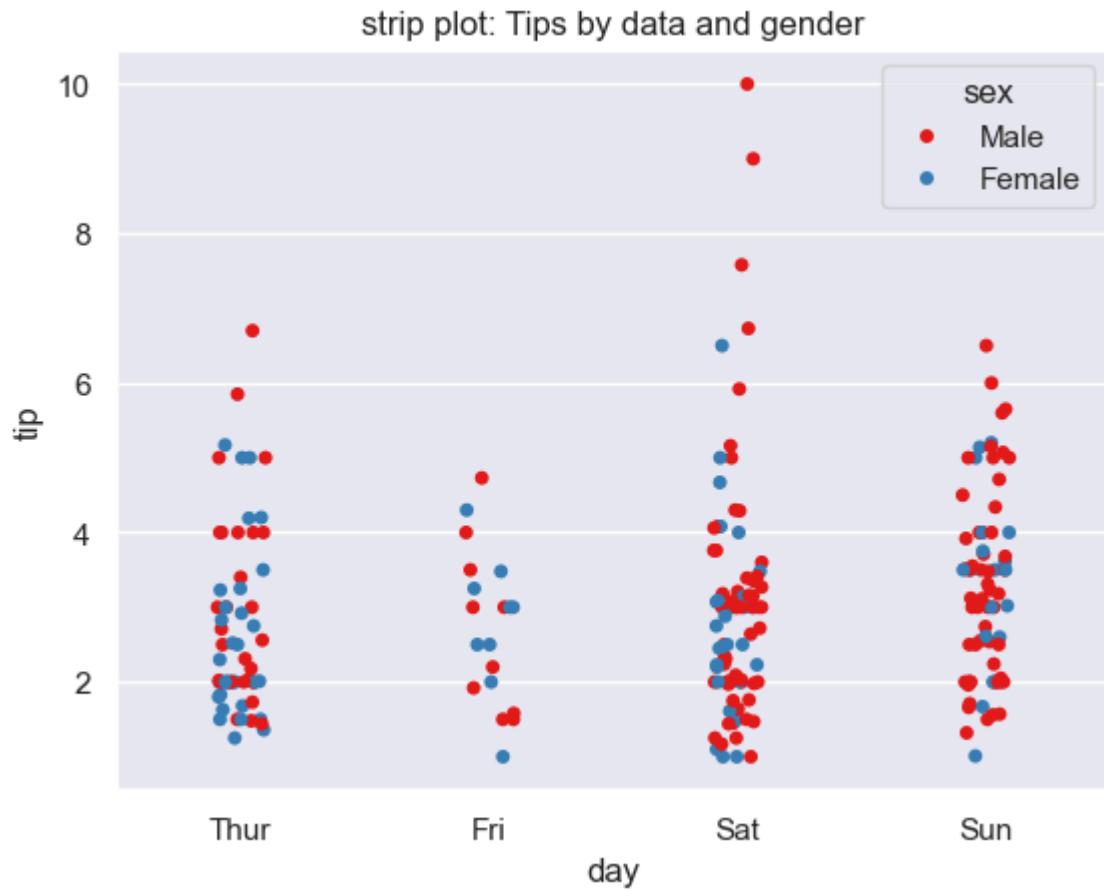


```
In [29]: # Facetgrid
g = sns.FacetGrid(tips, col='time', row='smoker', margin_titles=True).map(sns.hist)
```

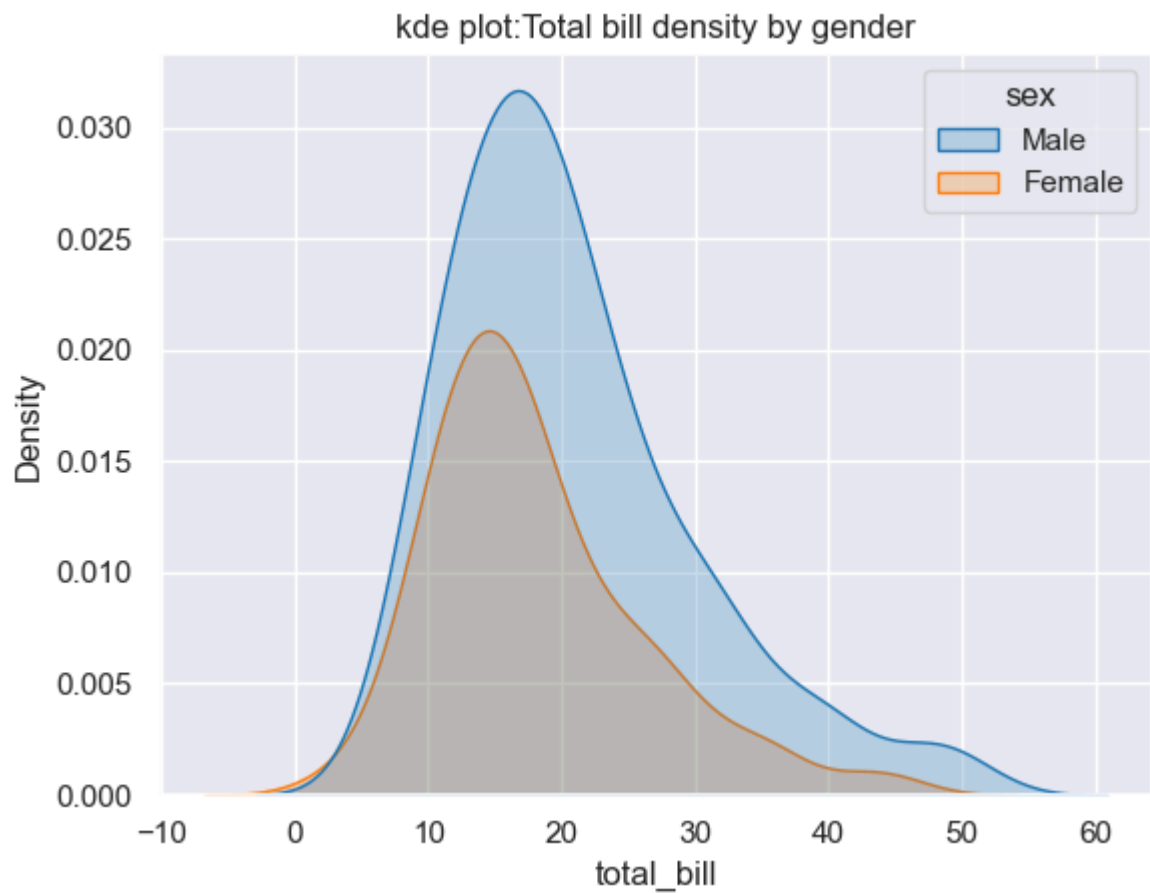
```
Out[29]: <seaborn.axisgrid.FacetGrid at 0x29cd3ec0b90>
```



```
In [30]: #strip plot
sns.stripplot(data=tips, x='day', y='tip', hue='sex', jitter=True, palette='Set1')
plt.title("strip plot: Tips by data and gender")
plt.show()
```



```
In [31]: # KDE PLOT
sns.kdeplot(data=tips, x='total_bill', hue='sex', fill=True, palette='tab10')
plt.title("kde plot:Total bill density by gender")
plt.show()
```





In [ ]:

In [ ]:

In [ ]: