In [2]:
```
pip install --upgrade seaborn
```

```
Requirement already satisfied: seaborn in c:\users\dell\anaconda3\lib\site-packag
es (0.13.2)Note: you may need to restart the kernel to use updated packages.

Requirement already satisfied: numpy!=1.24.0,>=1.20 in c:\users\dell\anaconda3\li
b\site-packages (from seaborn) (1.26.4)
Requirement already satisfied: pandas>=1.2 in c:\users\dell\anaconda3\lib\site-pa
ckages (from seaborn) (2.2.2)
Requirement already satisfied: matplotlib!=3.6.1,>=3.4 in c:\users\dell\anaconda3
\lib\site-packages (from seaborn) (3.9.2)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\dell\anaconda3\lib\si
te-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (1.2.0)
Requirement already satisfied: cycler>=0.10 in c:\users\dell\anaconda3\lib\site-p
ackages (from matplotlib!=3.6.1,>=3.4->seaborn) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\dell\anaconda3\lib\s
ite-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (4.51.0)
Requirement already satisfied: kiwisolver>=1.3.1 in c:\users\dell\anaconda3\lib\s
ite-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (1.4.4)
Requirement already satisfied: packaging>=20.0 in c:\users\dell\anaconda3\lib\sit
e-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (24.1)
Requirement already satisfied: pillow>=8 in c:\users\dell\anaconda3\lib\site-pack
ages (from matplotlib!=3.6.1,>=3.4->seaborn) (10.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\dell\anaconda3\lib\si
te-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (3.1.2)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\dell\anaconda3\li
b\site-packages (from matplotlib!=3.6.1,>=3.4->seaborn) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\dell\anaconda3\lib\site-p
ackages (from pandas>=1.2->seaborn) (2024.1)
Requirement already satisfied: tzdata>=2022.7 in c:\users\dell\anaconda3\lib\site
-packages (from pandas>=1.2->seaborn) (2023.3)
Requirement already satisfied: six>=1.5 in c:\users\dell\anaconda3\lib\site-packa
ges (from python-dateutil>=2.7->matplotlib!=3.6.1,>=3.4->seaborn) (1.16.0)
```

In [4]:
```
import warnings
warnings.filterwarnings("ignore", category=FutureWarning)
```

In [6]:
```
import seaborn as sns
```

In [8]:
```
sns.get_dataset_names()
```

Out[8]:
```
['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 [10]:
```
tips = sns.load_dataset("tips")
tips.head()
```

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

In [12]:
```
tips.columns
```

Out[12]:
```
Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='obj
ect')
```

In [14]:
```
titanic = sns.load_dataset("titanic")
titanic.head()
```

Out[14]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adul
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 [16]:
```
tips
```

Out[16]:

	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 [18]:
```
sns.set_theme(style="darkgrid")
```

In [20]:
```
tips.to_csv("tips_dataset.csv", index=False)
import pandas as pd
```

In [22]:
```
import os
os.getcwd()
```

Out[22]:
```
'C:\\Users\\DELL'
```

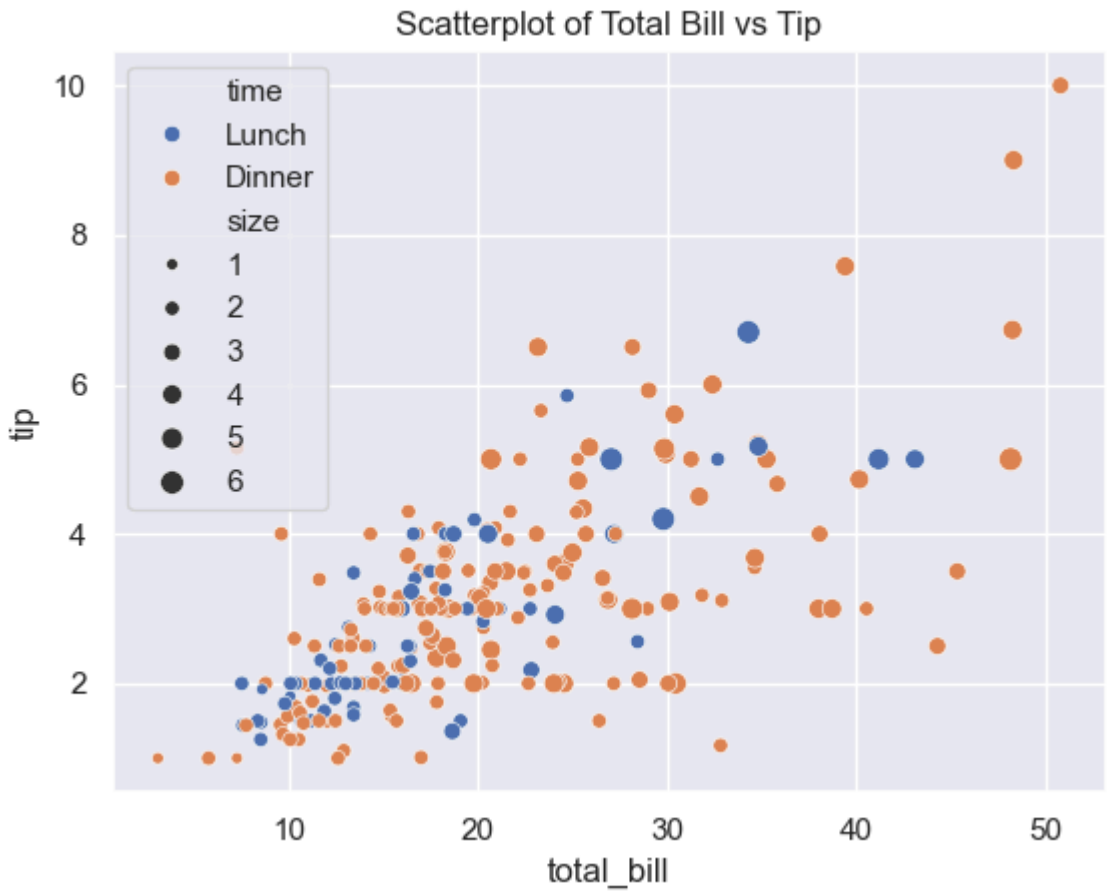
In [24]:
```
import matplotlib.pyplot as plt
```

In [26]:
```
plt.figure(figsize=(8, 6))
```

Out[26]:
```
<Figure size 800x600 with 0 Axes>
```

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

In [28]:
```
sns.scatterplot(data=tips, x="total_bill", y="tip",hue="time", size="size", pale
plt.title("Scatterplot of Total Bill vs Tip")
plt.show()
```

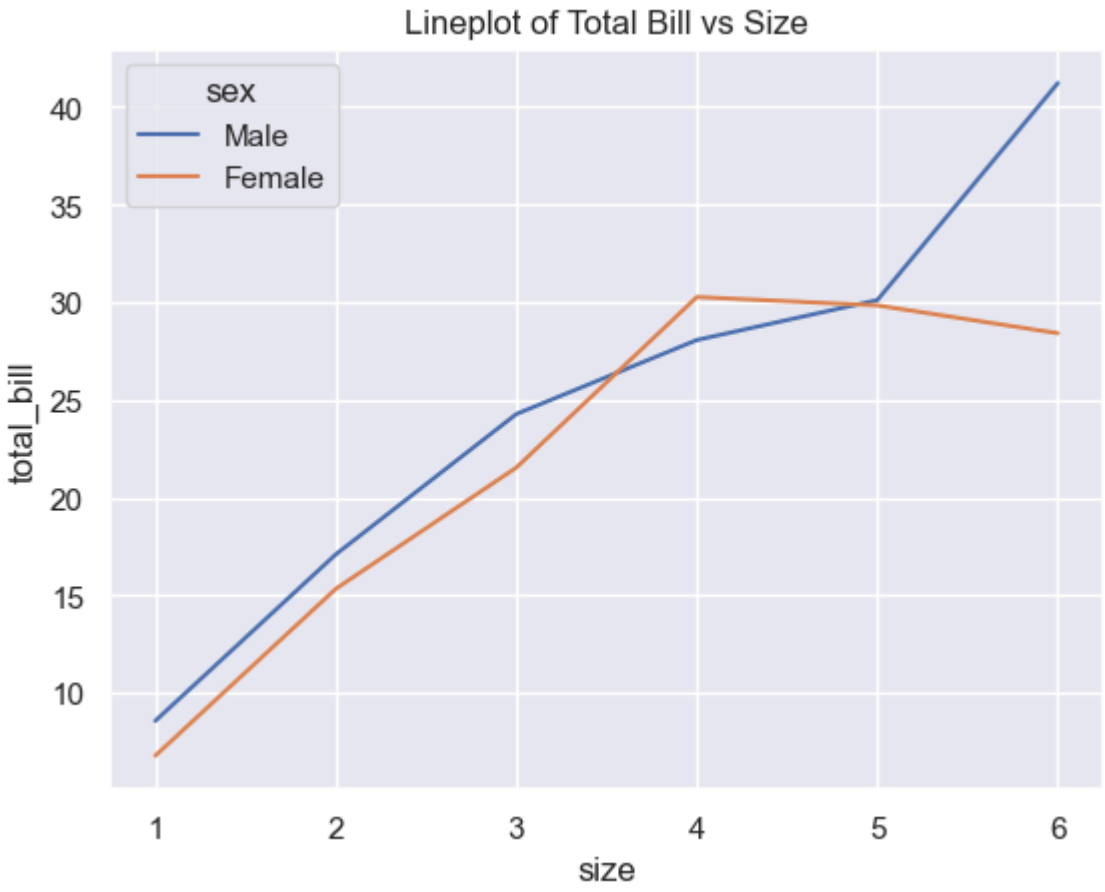


In [30]:
```
sns.lineplot(data=tips, x= 'size', y='total_bill', hue='sex',markers='o')
plt.title("Lineplot of Total Bill vs Size")
plt.show()
```

In [32]:
```
tips.columns
```

Out[32]:
```
Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='obj
ect')
```

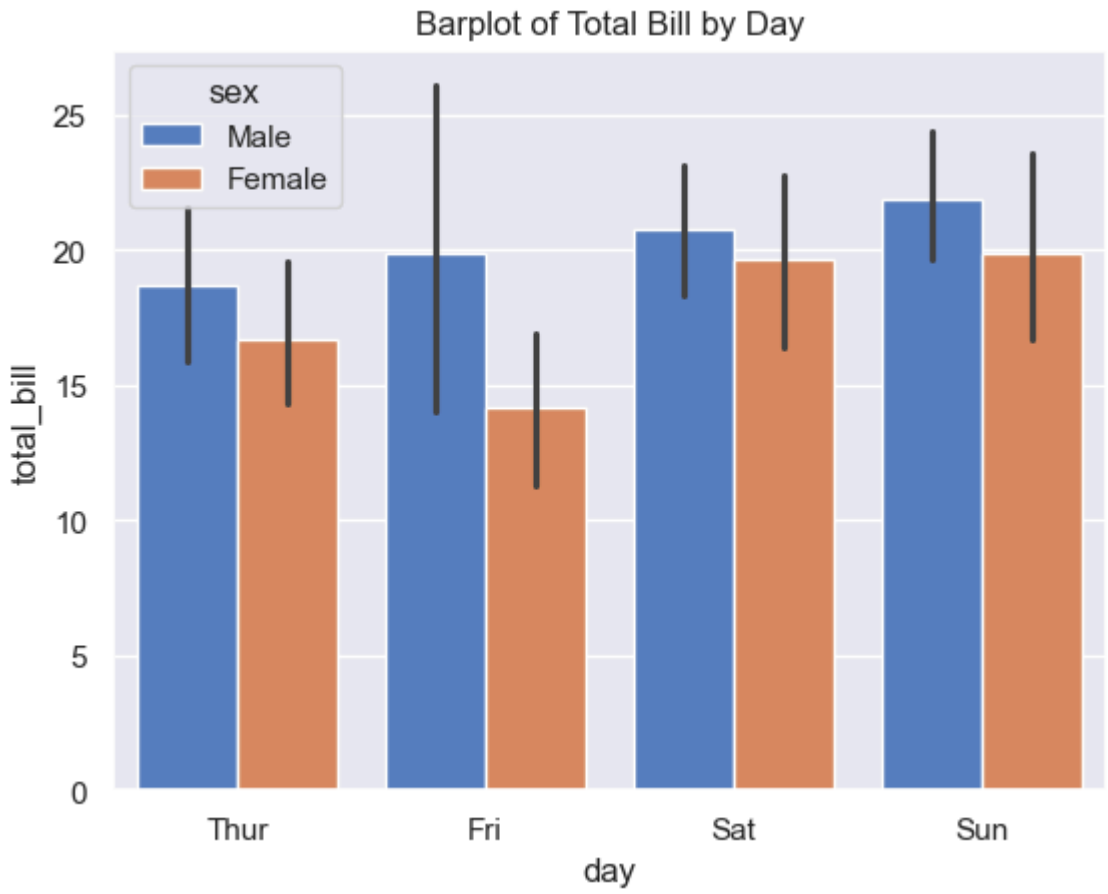
In [34]:
```
sns.lineplot(data=tips, x= 'size', y='total_bill', hue='sex',ci=None, markers='o
plt.title("Lineplot of Total Bill vs Size")
plt.show()
```



In [36]:
```
tips.columns
```

Out[36]:
```
Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='obj
ect')
```

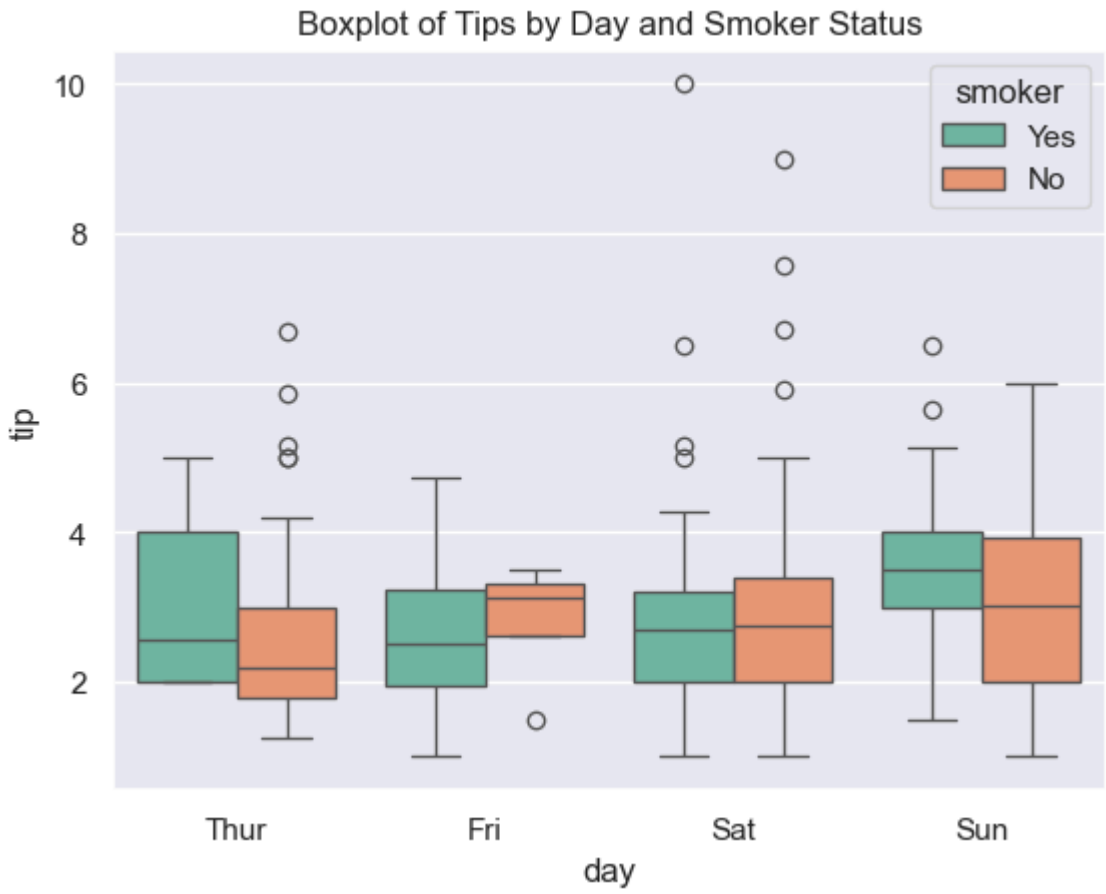
In [38]:
```
sns.barplot(data=tips, x='day', y='total_bill', hue = 'sex',palette='muted')
plt.title("Barplot of Total Bill by Day")
plt.show()
```



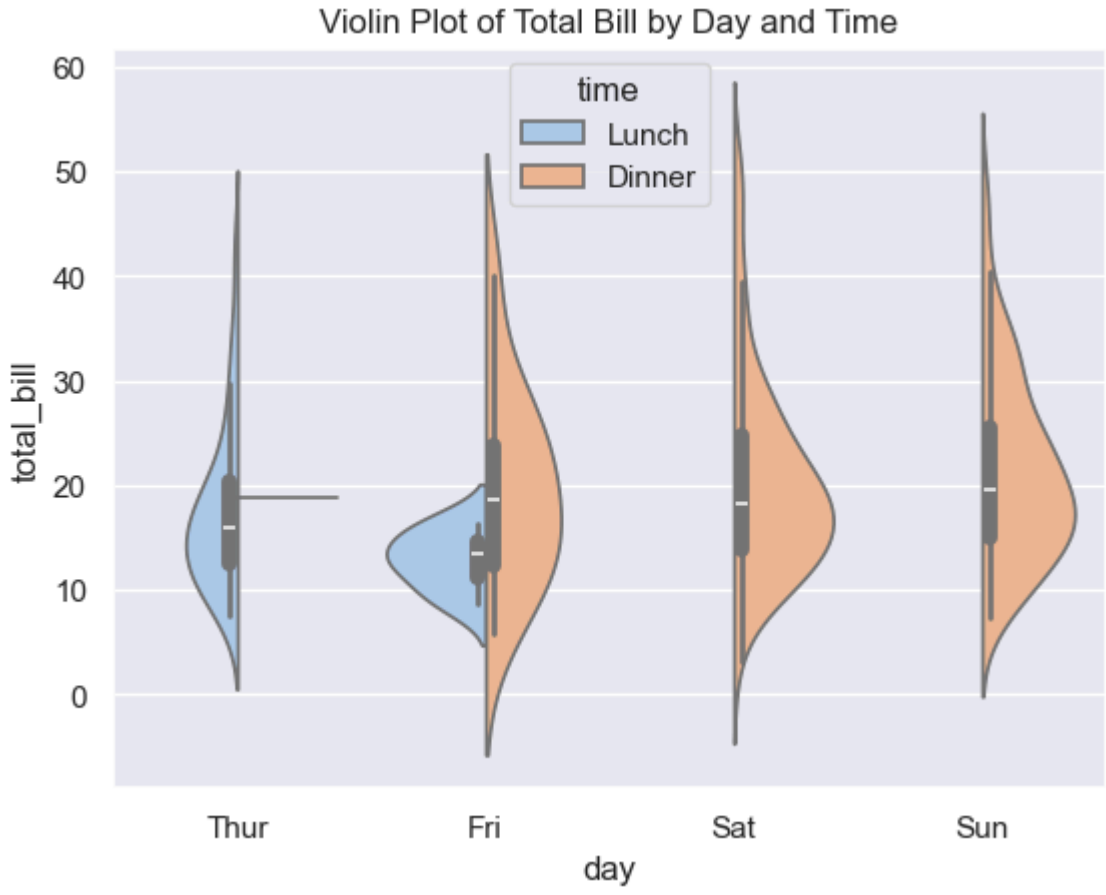
In [40]:
```
tips.columns
```

Out[40]:
```
Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='obj
ect')
```

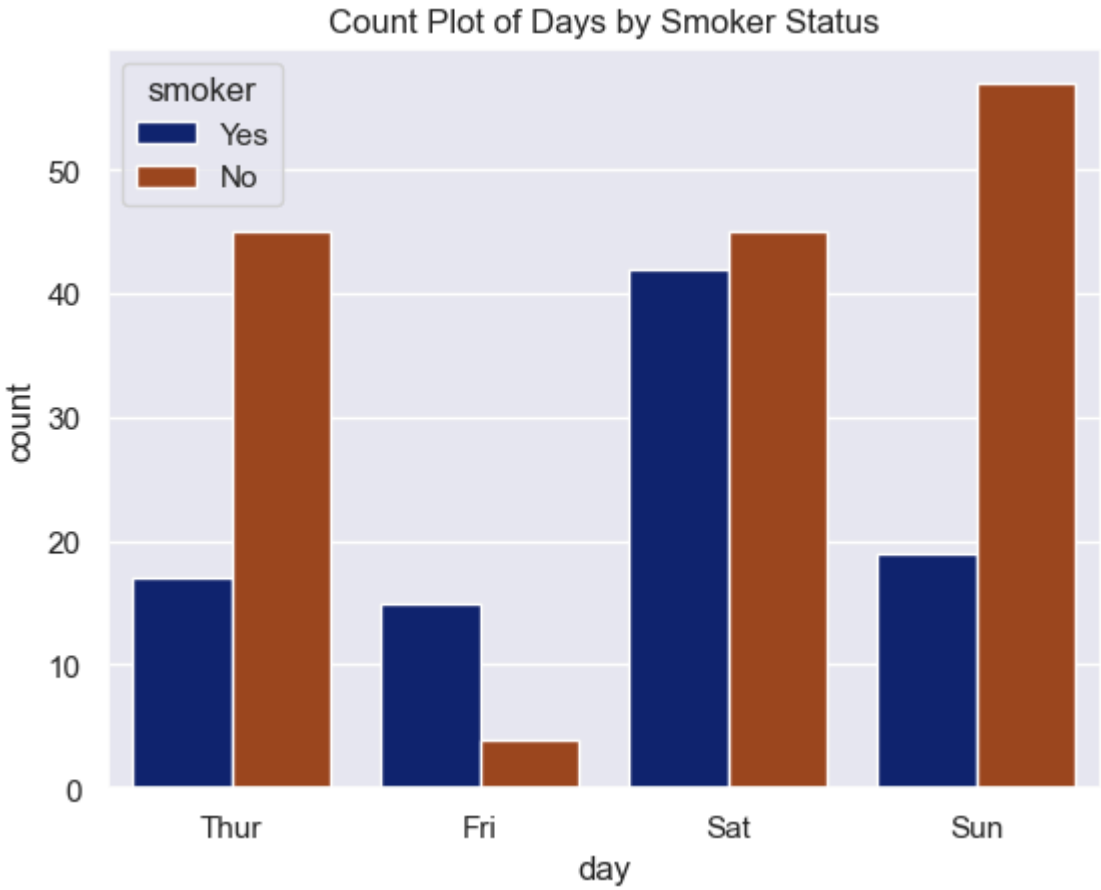
In [42]:
```
sns.boxplot(data=tips, x='day', y='tip', hue='smoker', palette='Set2')
plt.title("Boxplot of Tips by Day and Smoker Status")
plt.show()
```



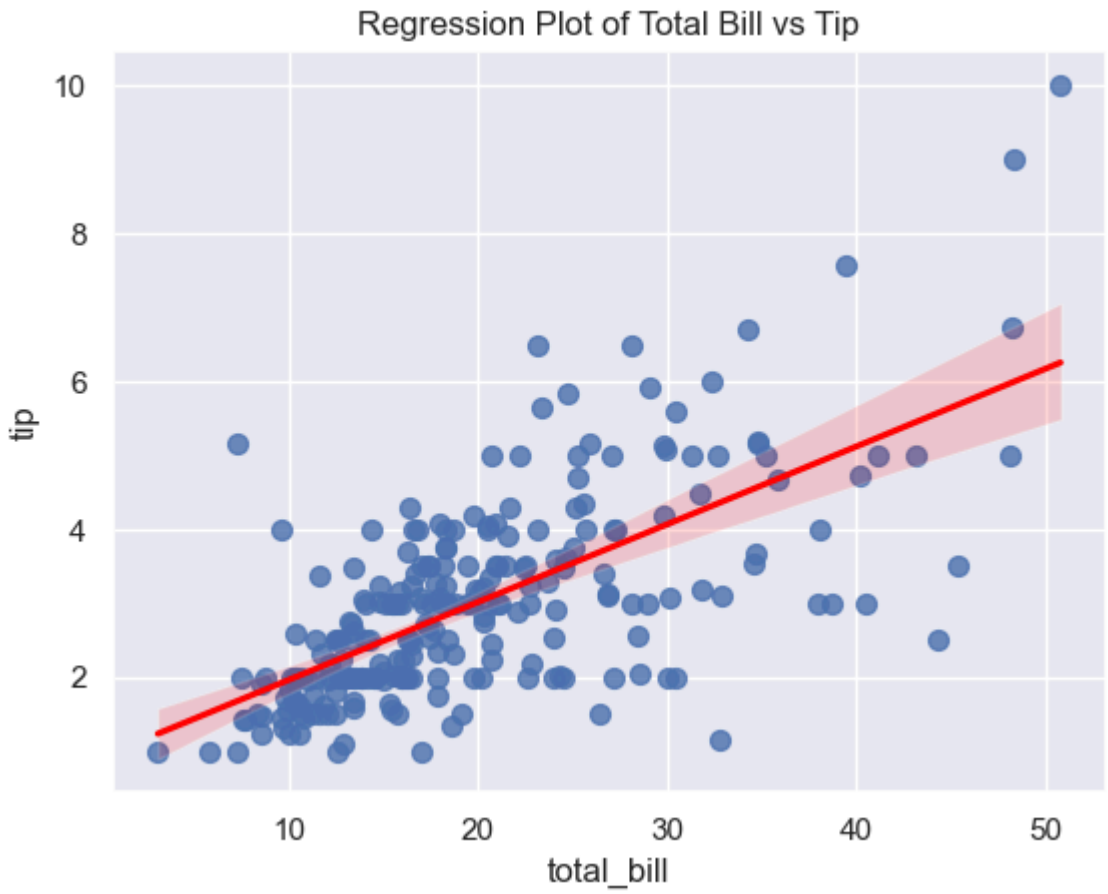
In [44]:
```
sns.violinplot(data=tips, x='day', y='total_bill', hue='time', split=True, palet
plt.title("Violin Plot of Total Bill by Day and Time")
plt.show()
```



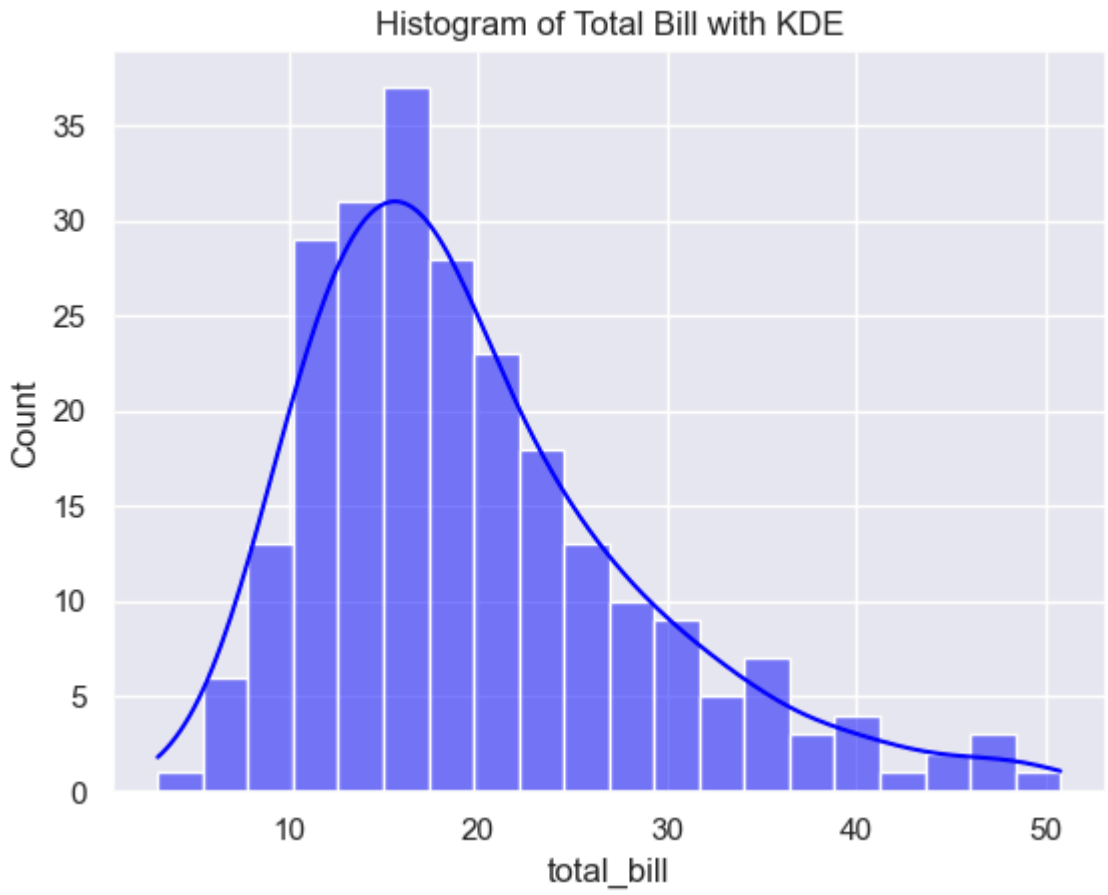
In [46]:
```
sns.countplot(data=tips, x='day', hue='smoker', palette='dark')
plt.title("Count Plot of Days by Smoker Status")
plt.show()
```



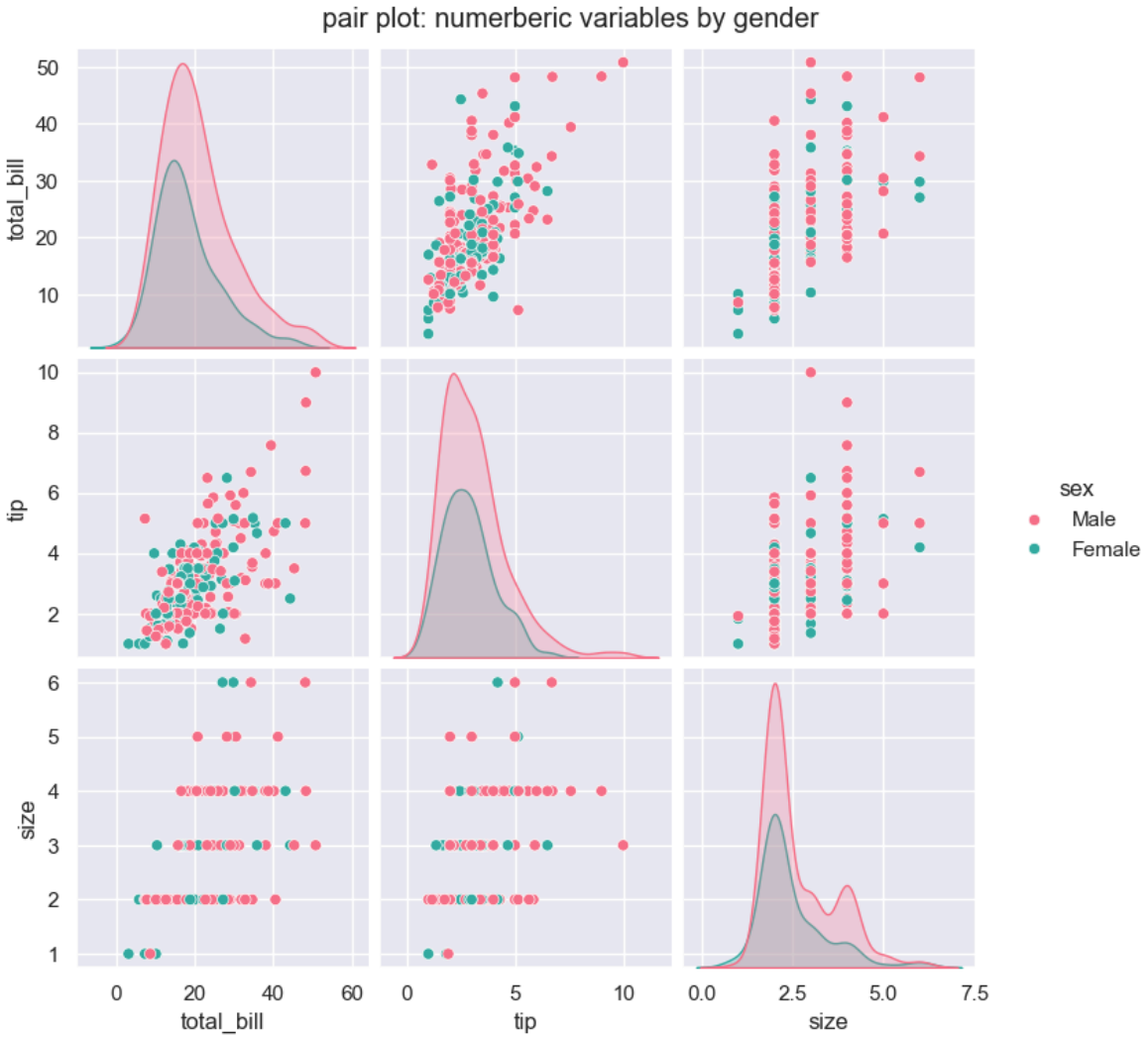
In [48]:
```
sns.regplot(data=tips, x='total_bill', y='tip', scatter_kws={'s':50}, line_kws={
plt.title("Regression Plot of Total Bill vs Tip")
plt.show()
```



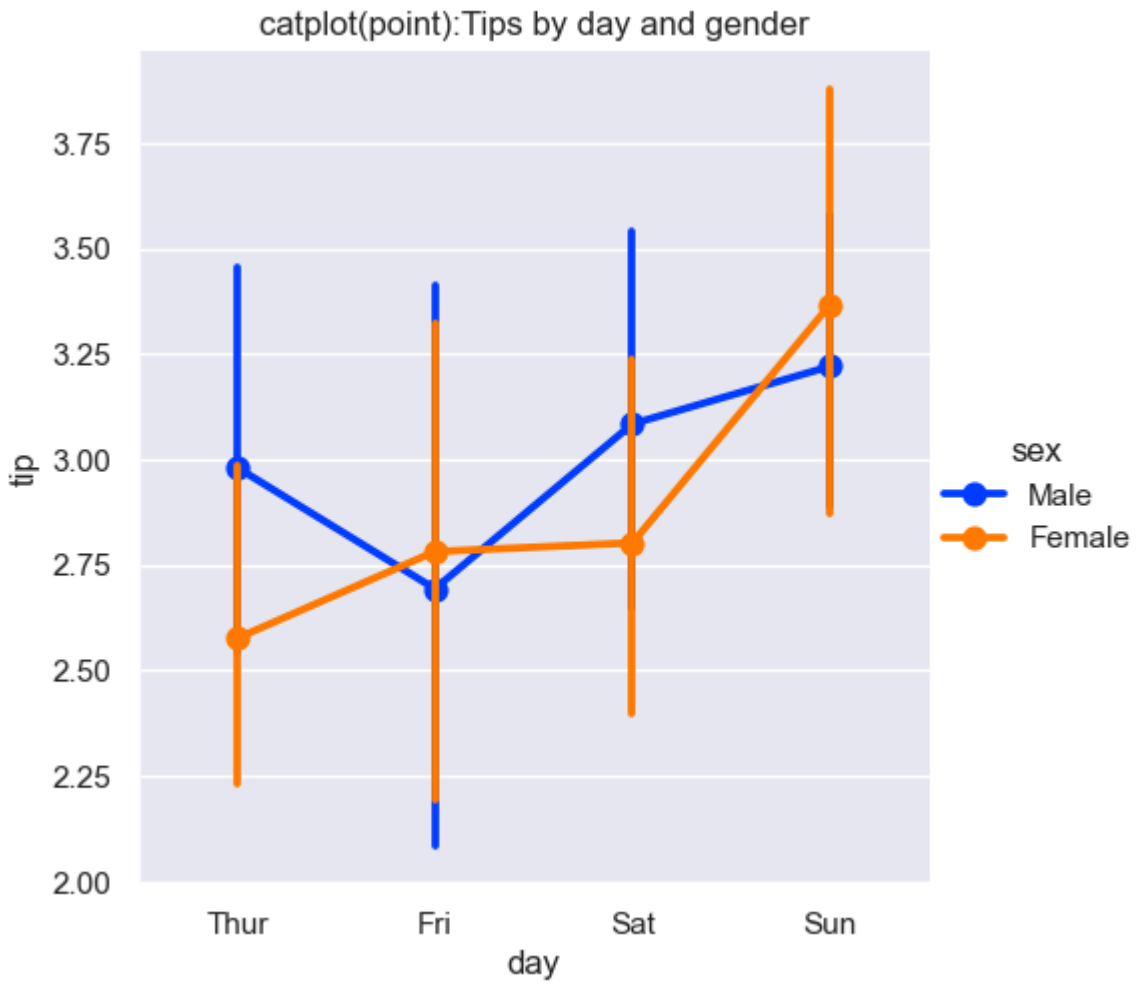
In [50]:
```
sns.histplot(data=tips, x='total_bill', bins=20, kde=True, color='blue')
plt.title("Histogram of Total Bill with KDE")
plt.show()
```



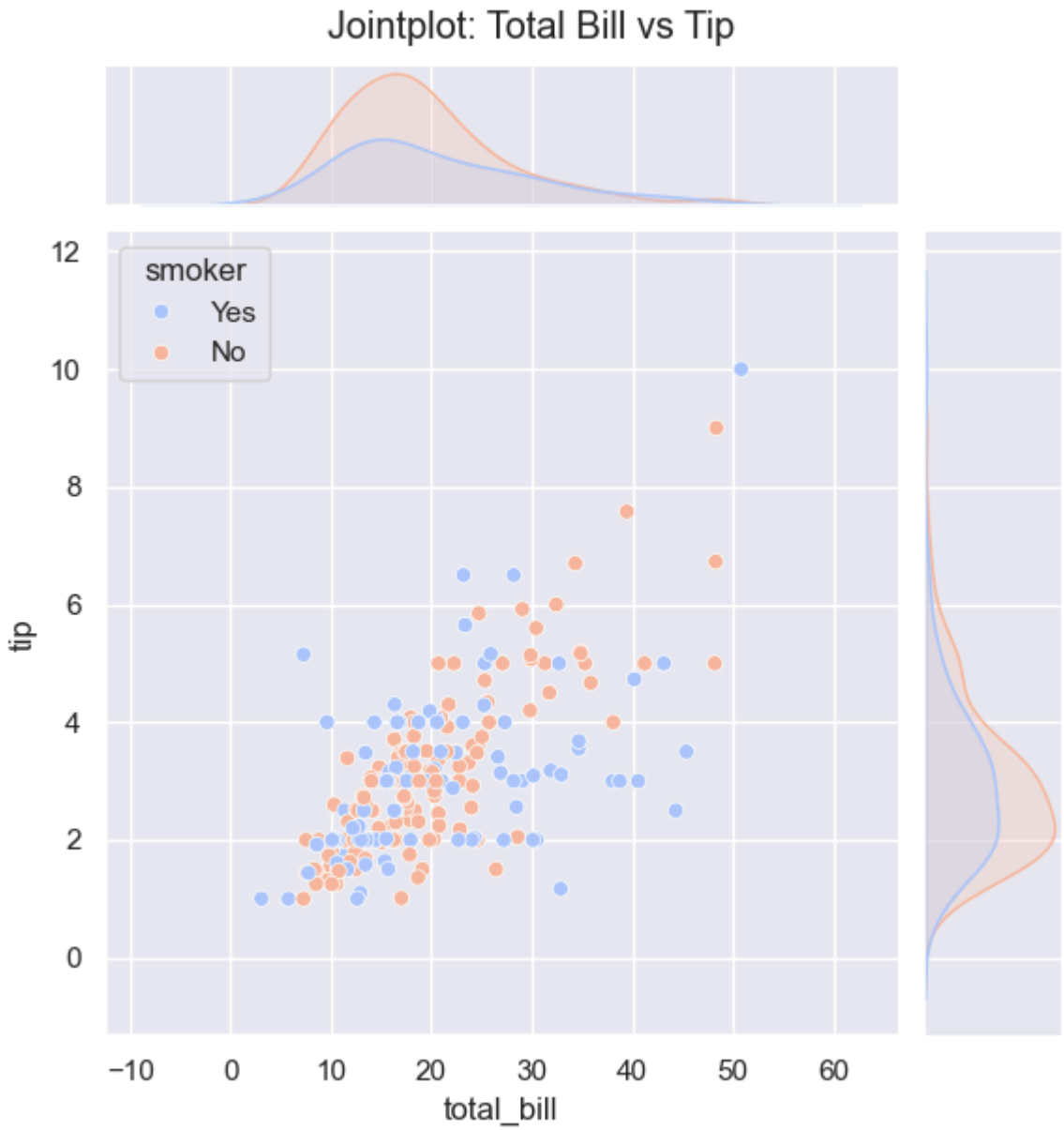
In [52]:
```
sns.pairplot(tips, hue='sex', vars=["total_bill", "tip", "size"], palette='husl'
plt.suptitle("pair plot: numerberic variables by gender", y=1.02)
plt.show()
```



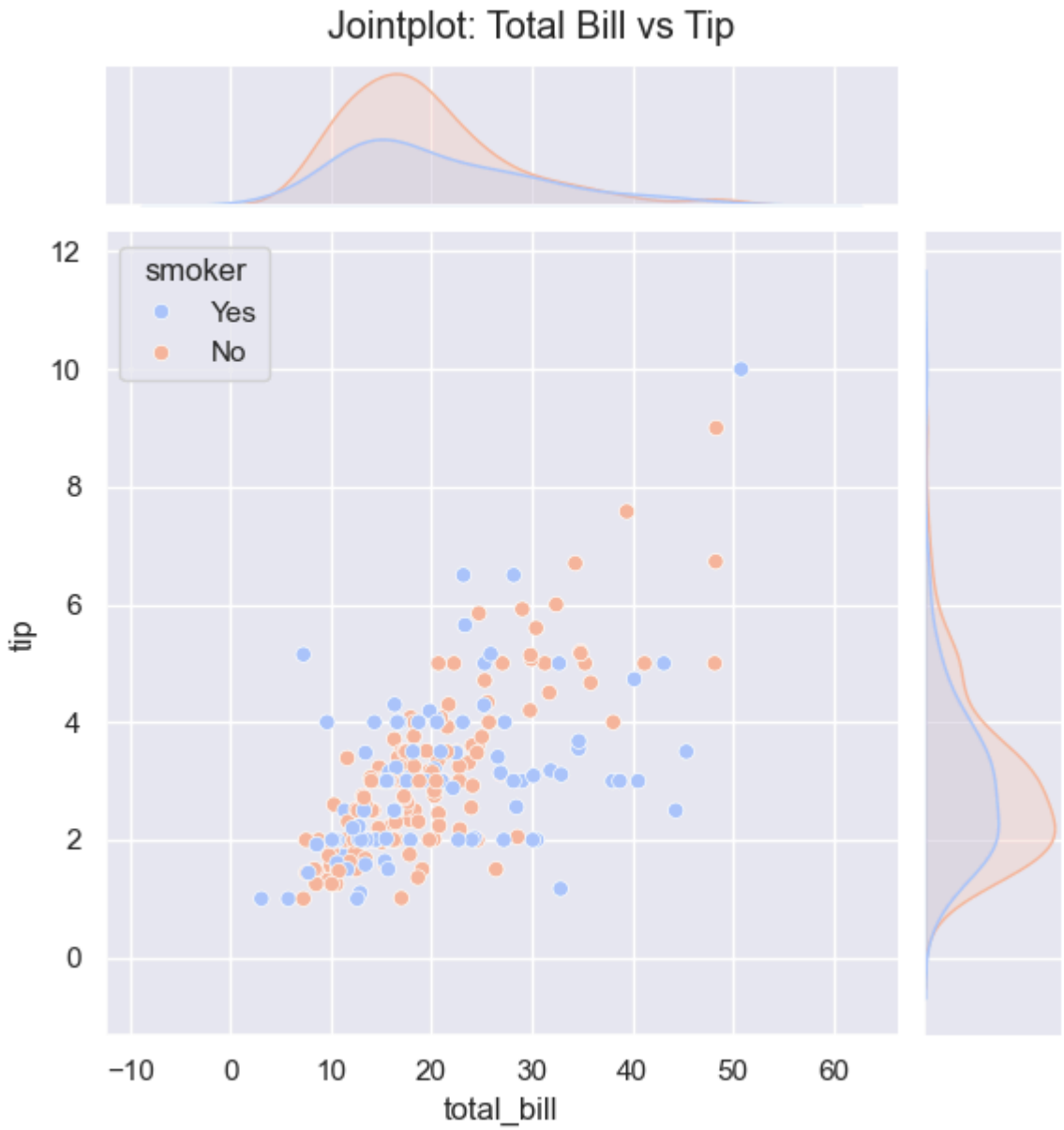
In [54]:
```
sns.catplot(data=tips, x='day', y='tip', hue='sex', kind='point', palette='brigh
plt.title("catplot(point):Tips by day and gender")
plt.show()
```



In [56]:
```
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()
```

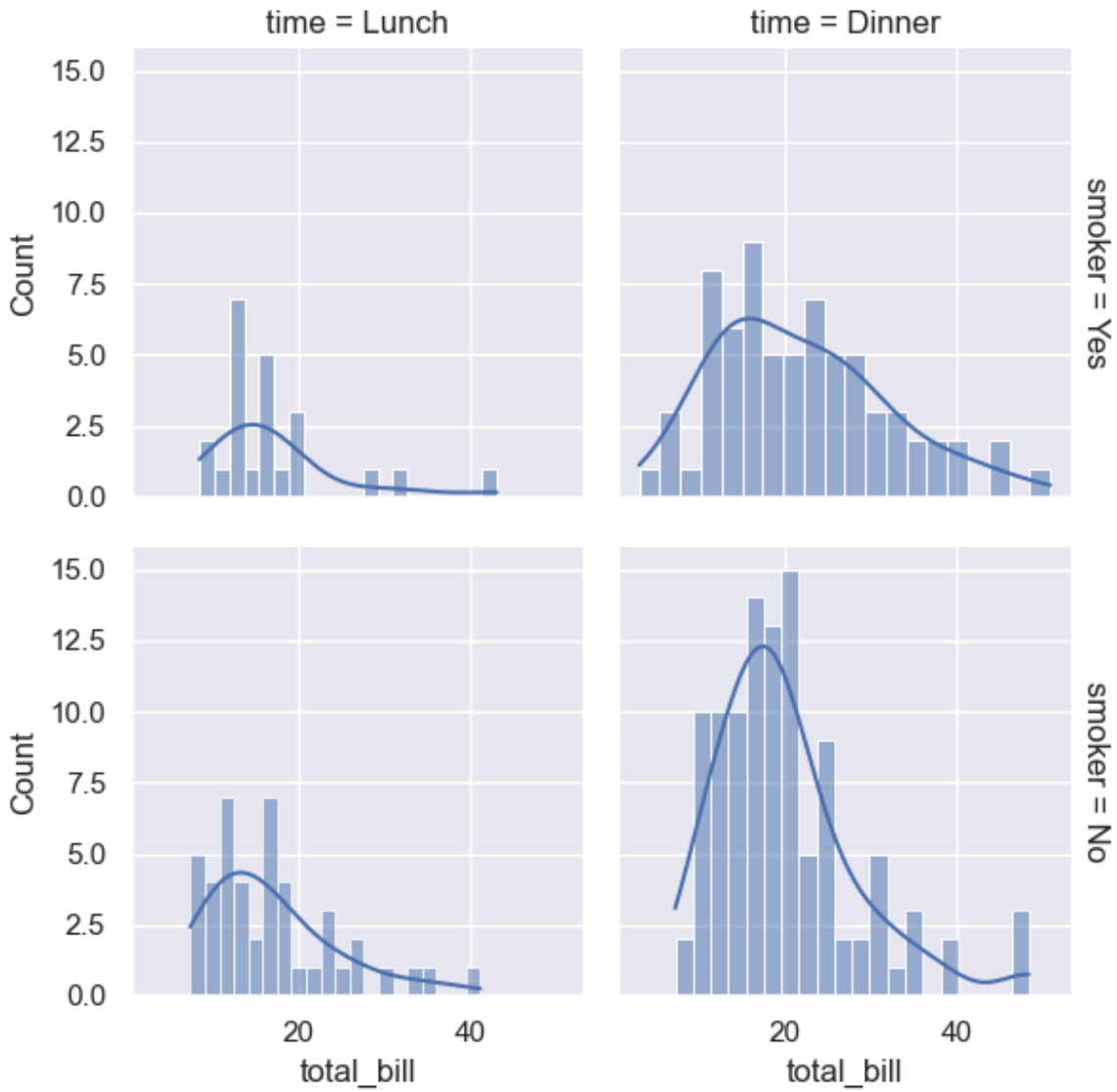


In [58]:
```
sns.jointplot(data=tips, x='total_bill', y='tip', kind='scatter', hue='smoker',
plt.suptitle("Jointplot: Total Bill vs Tip", y=1.02)
plt.show()
```

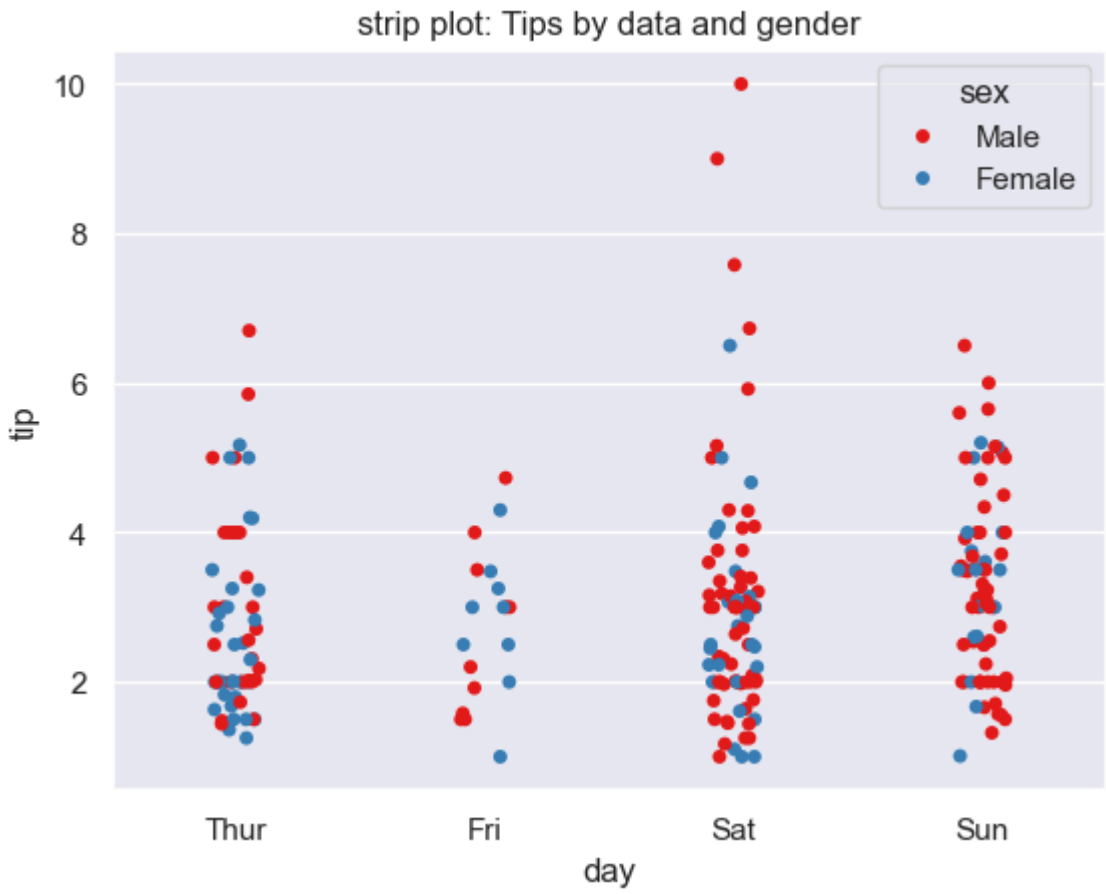


In [60]:
```
g = sns.FacetGrid(tips, col='time', row='smoker', margin_titles=True).map(sns.hi
g
```

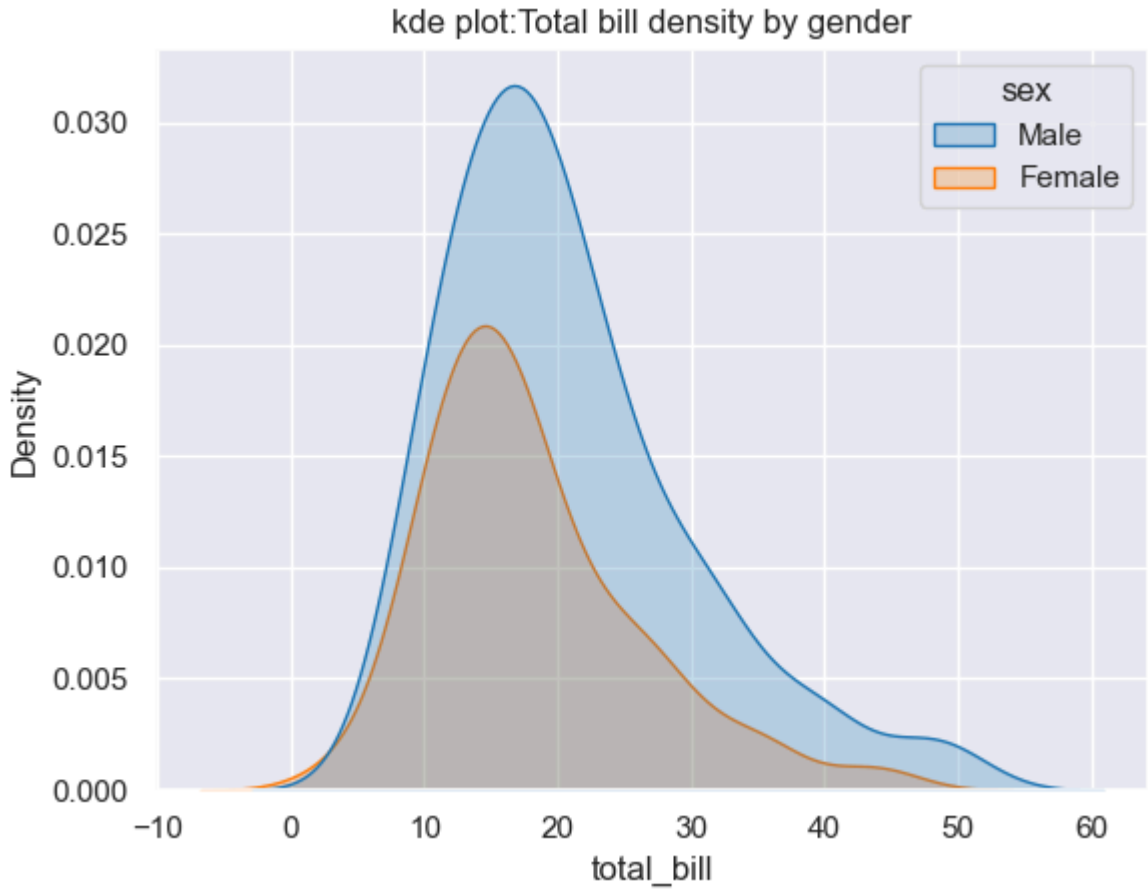
Out[60]:
```
<seaborn.axisgrid.FacetGrid at 0x224d06361e0>
```



In [62]:
```
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 [64]:
```
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 [ ]: